



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

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Thank you for choosing crash data from the National Highway Traffic Safety Administration (NHTSA) for your research or other use. The information contained in this motor vehicle crash report is collected, maintained and distributed in accordance with Public Law 89-564. In accordance with this Public Law, NHTSA is required not to release any case information until completion of quality control procedures. These procedures include a review of the case material to extract all names, licenses and registration numbers, non-coded interview material, non-research related researcher comments in the margins, non-factual data, and the production number portion of the vehicle identification number (VIN).

If you requested NHTSA to query its database files in order to identify a specific crash, then that query was made using non-personal descriptors you provided for use in our search. This motor vehicle crash may have been identified from a data search and matches the general, non-personal descriptors you provided, but we cannot confirm that this is the specific crash report you requested.

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*** *** ***



AUTO SAFETY HOTLINE
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Wash. D.C. Area 366-0123

NATIONAL CAPITOL SYSTEMS, INC.

VEHICLE ACCIDENT INVESTIGATION

CASE NO. 90-13

 ALABAMA

TECHNICAL REPORT

NATIONAL CAPITOL SYSTEMS, INC.

[REDACTED]

VEHICLE ACCIDENT INVESTIGATION

CASE NO. 90-13

[REDACTED] ALABAMA

Contract No. DTNH 22-87-C-17169

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Vehicle Accident Investigation NCSI Case No. 90-13		5. Report Date ██████████ 1991	
		6. Performing Organization Code	
7. Author(s) Accident Investigation Team (██████████)		8. Performing Organization Report No.	
9. Performing Organization Name and Address National Capitol Systems, Inc. ██████████ ██████████, VA ██████████		10. Work Unit No.	
		11. Contract or Grant No. DTNH 22-87-C17169	
12. Sponsoring Agency Name and Address U.S. Department of Transportation NHTSA - National Highway Traffic Safety Administration		13. Type of Report and Period Covered Technical Report Accident Date ██████/90	
		14. Sponsoring Agency Code	
15. Supplementary Notes 1991 Chevrolet Caprice equipped with a driver supplemental airbag restraint system involved in a head-on impact with a 1991 Chevrolet S-10 Blazer.			
16. Abstract See Summary (page 1)			
17. Key Words Airbag Deployment Passive Restraint		18. Distribution Statement General Public	
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Summary

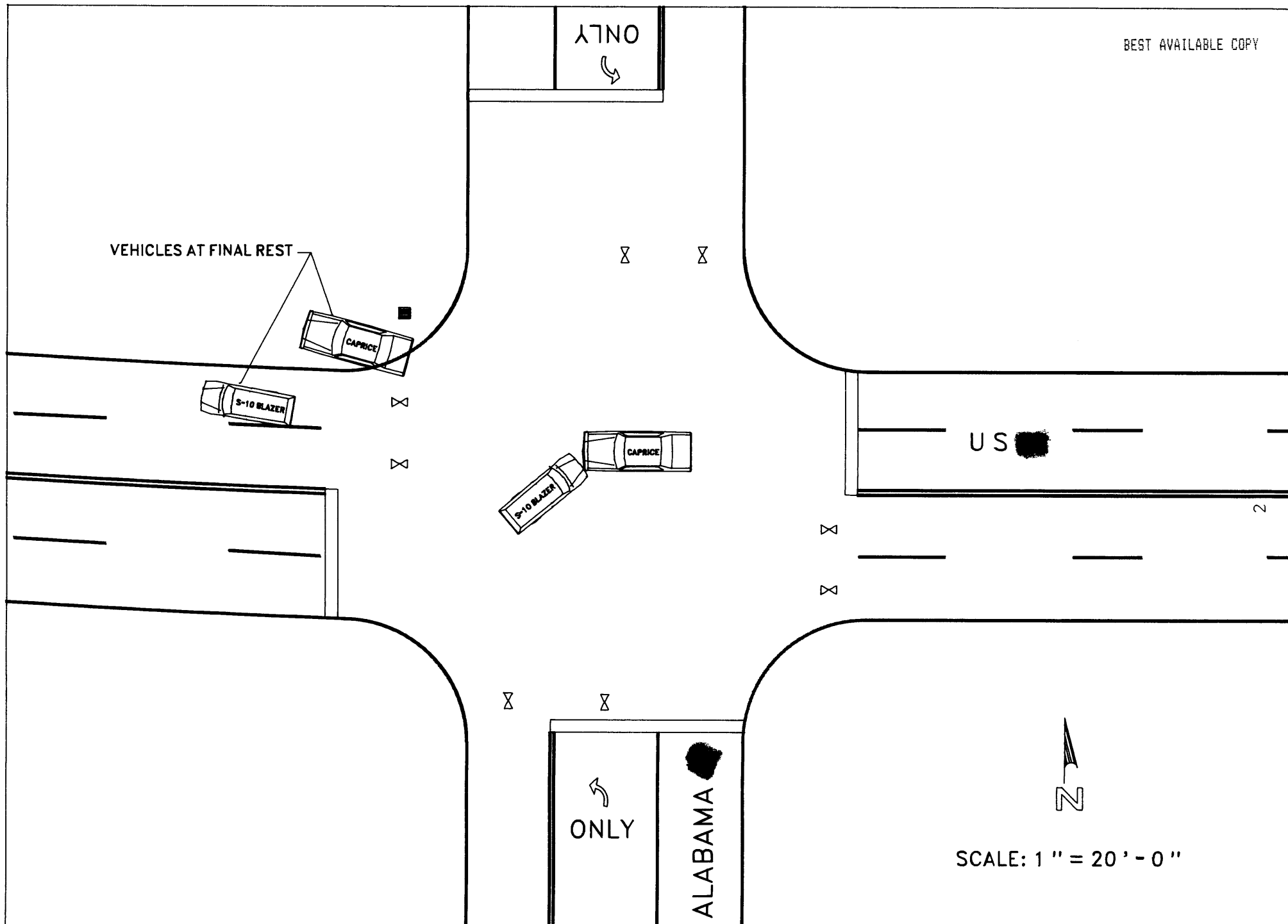
This report is an in-depth, off-scene vehicle accident study involving a 1991 Chevrolet Caprice (equipped with a supplemental airbag restraint system) involved in a head-on impact with a 1991 Chevrolet S-10 Blazer. The accident occurred on [REDACTED], 1990, at 1704 hours, at the intersection of U.S. Route [REDACTED] and State Route [REDACTED] in [REDACTED] Alabama.

Prior to the accident the Caprice was proceeding west on U.S. Route [REDACTED] at a police estimated speed of 35 miles per hour. The Blazer was traveling east on U.S. Route [REDACTED] in the inside lane of the four-lane undivided roadway. As the vehicles simultaneously reached the intersection, the Blazer attempted a left turn to travel north on State Route [REDACTED]. The front left corner of the Caprice struck the front of the Blazer in a head-on impact configuration.

Following impact the Caprice rotated approximately 15 degrees clockwise and came to rest in a vacant lot just beyond the northwest quadrant of the intersection. The Blazer rotated counter-clockwise approximately 120 degrees and came to rest in the outside, eastbound travel lane just west of the intersection.

Damage to both vehicles was considerable with the Caprice being totaled by the insurance company with a repair estimate of \$18,900.00. A Collision Deformation Classification of 11-FYEW-2 was assigned to the Caprice's impact damage. Maximum residual crush measured at the left end of the front bumper was 17.5 inches. An EDCRASH run resulted in a computer generated Delta V of 14.9 miles per hour for the Caprice. The Blazer was under repair upon inspection and an estimated Collision Deformation Classification of 01-FDEW-2 with maximum crush of 12 inches was assigned from damaged parts. EDCRASH generated a Delta V of 18.5 miles per hour for the Blazer.

The driver and right front passenger of the Caprice were restrained by their manual lap and shoulder belts when the accident occurred. The driver sustained a fractured forearm from bracing against the steering wheel. He also received unspecified minor contusions and abrasions. The right front passenger sustained a fractured rib and minor contusions in the collision. They were taken to a local hospital where they were treated and released. The driver of the Blazer was also transported a local hospital for treatment. The extent of her injuries is not known, but not believed to be serious.



NHTSA IN-DEPTH AIRBAG ACCIDENT INVESTIGATION CASE NO. 90-13

ACCIDENT DATE: [REDACTED] 90

LOCATION: [REDACTED], ALABAMA

NATIONAL CAPITOL
SYSTEMS, INCORPORATED

NCSI ACCIDENT INVESTIGATION
CASE NO. 90-13
[REDACTED] ALABAMA

IDENTIFICATION

Location: Intersection of U.S. Route [REDACTED] and State
Route [REDACTED] in [REDACTED], Alabama

Area/Type: Rural/Business

Accident Date/Time: [REDACTED], 1990, at 1704 hours

Notification Date/Time: [REDACTED], 1990, at 0800 hours

Accident Type: Car/Utility Vehicle, Head-on

Vehicle Occupant
Injury Severity: Moderate Injury (AIS-2)

AMBIENCE

Viewing Conditions: Daylight

Weather: Clear

Precipitation: None

Road Surface: Dry

ROADWAY

Location: U.S. Route [REDACTED]

Type: Principal Arterial

Traffic Density: Moderate

Width: 39 feet 11 inches

Number of Lanes: Four

Median: None

Shoulders: East - Curbed
West - Curbed

Surface: Asphalt

ROADWAY CONT'D

Vertical Alignment: Level at POI
Negative (2.6 percent) for V2 pre-impact

Horizontal Alignment: Straight at POI
Curved left for V2 pre-impact

TRAFFIC CONTROLS

Signals: On-colors signal light

Signs: Junction signs

Markings: Double yellow center line
Dashed white lane lines
White stop bar at intersection

Speed Limit: 35 miles per hour

VEHICLE

	<u>Airbag vehicle</u>	<u>Vehicle #2</u>
Year:	1991	1991
Make:	Chevrolet	Chevrolet
Model:	Caprice Classic	Blazer
Body Style:	Four door	Four door
VIN:	1G1BN53E1MW*****	1GNC513Z8M2*****
Color:	Red	Grey
Odometer:	5,992	
Transmission:	Automatic, column mounted transmission selector	Automatic, column mounted transmission selector
Active Restraints:	Lap and shoulder belts for the left front and right front seats, lap belt for front center; Lap and shoulder belts for the left rear and right rear seats, lap belt for rear center	Lap and shoulder for the left front and right front seats; Lap and shoulder for the left rear and right rear seats, lap belt for rear center seat

VEHICLE CONT'D

	<u>Airbag Vehicle</u>	<u>Vehicle #2</u>
Passive Restraints:	Automatic inflatable restraint system for the driver's seating position	None
Defects:	None	None
Tow Status:	Towed due to damage	Towed due to damage

VEHICLE DAMAGE

Exterior:	<p>The front left corner of the airbag vehicle contacted the front of vehicle #2. Direct impact damage extended 42 inches across the frontal plane of the vehicle. The most significant crush was located at the front left corner with the bumper displaced rearward 17.5 inches. Impact damage extended beyond that point to include the rearward displacement of the front wheel assembly. A CDC of 11-FYEW-2 was assigned to the impact damage. Crush dimensions measured along the bumper were as follows:</p> <table><tbody><tr><td>C1 = 17.5"</td><td>C2 = 15.0"</td></tr><tr><td>C3 = 9.25"</td><td>C4 = 9.0"</td></tr><tr><td>C5 = 3.0"</td><td>C6 = 1.0"</td></tr></tbody></table> <p>Damaged components included the front bumper, hood, grille, radiator, left front fender, left front wheel assembly, left front door, roof, windshield, left floor pan, numerous engine components, etc.</p>	C1 = 17.5"	C2 = 15.0"	C3 = 9.25"	C4 = 9.0"	C5 = 3.0"	C6 = 1.0"	<p>The front of vehicle #2 contacted the front left of the airbag vehicle in a head-on impact configuration. The vehicle sustained direct damage across the entire front bumper. Crush measurements were estimated from damaged parts since the bumper was removed before the vehicle was inspected. A CDC of 01-FDEW-2 was assigned. Estimated crush dimensions are as follows:</p> <table><tbody><tr><td>C1 = 2.0"</td><td>C2 = 4.0"</td></tr><tr><td>C3 = 6.0"</td><td>C4 = 12.0"</td></tr><tr><td>C5 = 8.0"</td><td>C6 = 6.0"</td></tr></tbody></table> <p>Damaged components included the front bumper, radiator, grille, hood, left and right front fenders, frame rails, windshield, etc.</p>	C1 = 2.0"	C2 = 4.0"	C3 = 6.0"	C4 = 12.0"	C5 = 8.0"	C6 = 6.0"
C1 = 17.5"	C2 = 15.0"													
C3 = 9.25"	C4 = 9.0"													
C5 = 3.0"	C6 = 1.0"													
C1 = 2.0"	C2 = 4.0"													
C3 = 6.0"	C4 = 12.0"													
C5 = 8.0"	C6 = 6.0"													

VEHICLE DAMAGE CONT'D

	<u>Airbag Vehicle</u>	<u>Vehicle #2</u>
CDC:	11-FYEW-2	01-FDEW-2
Repair Cost:	\$18,900.00	Unknown
Interior:	<p>Interior damage resulted from the airbag deployment, occupant contact and intrusion from exterior damage.</p> <p>Airbag deployment resulted in separation of the steering wheel cover at the designated perforations. The airbag remained intact without any tears or cuts noted. Only a small smudge (blood) was found on surface of the deployed airbag.</p> <p>Occupant contact resulted in interior damage to the lower left instrument panel, rear view mirror, windshield and the glove box. Both the driver and right front passenger contacted the vehicle's interior during the impact.</p> <p>Approximately 1 inch of intrusion was noted to the left side floor pan. The left front wheel was displaced rearward into the floor pan resulting in this intrusion.</p>	<p>Vehicle #2 sustained interior damage as a result of occupant contact. Damage was observed to the steering wheel, lower left instrument panel and windshield. No other interior damage was noted.</p>

VEHICLE VELOCITY ESTIMATES

The damage only routine of the EDCRASH program was used to compute a change in velocity (Delta V) for the airbag vehicle's head-on impact with the Chevrolet Blazer. The results of the computer generated Delta V for the deployment impact are as follows:

	<u>AIRBAG VEHICLE</u>	<u>VEHICLE #2</u>
Total Delta V:	14.9 mph	18.5 mph
Longitudinal Delta V:	-12.9 mph	-16.0 mph
Lateral Delta V:	7.5 mph	-9.3 mph

COLLISION SEQUENCE

Pre-Impact: At approximately 1700 hours on [REDACTED] [REDACTED] 1990, the Chevrolet Caprice was traveling west on U.S. Route [REDACTED] passing through the small town of [REDACTED] Alabama. Along this travel path the roadway is straight and level. The roadway is a four-lane undivided road with a posted speed limit of 35 miles per hour. The vehicle was traveling at a police estimated speed of 35 miles per hour as it approached the intersection with State Route [REDACTED]. Traffic through the intersection is controlled by an on-colors signal light. The road was dry and the weather was clear.

A 1991 Chevrolet Blazer was traveling east on U.S. Route [REDACTED] nearing the intersection with State Route [REDACTED]. Along this path, U.S. [REDACTED] has a negative grade of 2.6 percent and is curved to the driver's left. The vehicles entered the intersection simultaneously and the Blazer attempted a left turn to travel north on State Route [REDACTED].

Impact: The front left half of the Caprice impacted the front of the Blazer in a head-on impact configuration. This impact resulted in maximum residual crush of 17.5 inches and an EDCRASH computed Delta V of 14.9 miles per hour for the Caprice. The Blazer sustained approximately 12 inches of residual crush and a Delta V of 18.5 miles per hour. The airbag module of the Caprice deployed on impact as designed.

COLLISION SEQUENCE CONT'D

Post-Impact: Following impact the Caprice rotated clockwise roughly 15 degrees and came to rest in a vacant lot just beyond the northwest quadrant of the intersection. The Blazer rotated counter-clockwise 120 degrees and came to rest in the outside lane for eastbound travel just west of the intersection.

Driver Activities: The driver and his passenger sustained minor to moderate injuries in the crash and remained in the vehicle until assistance arrived.

Police Activities: A local police officer was in the vicinity at the time of the crash and was on scene immediately. He called for additional officers to assist in the investigation and scene clearance.

Rescue Activities: An ambulance was dispatched to the scene and arrived at 1713 hours, nine minutes following the call. The driver of the Caprice was transported by ambulance to the local hospital. The right front passenger was transported by a police unit to the same hospital. The driver of the Blazer was transported by ambulance to a [REDACTED] in a nearby city.

Scene Clearance: Both vehicles sustained disabling damage and were towed from the accident scene. The Caprice was subsequently totaled and sold for salvage. The Blazer was under repair when it was inspected.

RELEVANT SAFETY ISSUES

Applicable Standards:

FMVSS 208: Occupant Crash Protection in Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Busses. The Chevrolet Caprice was equipped with a driver side airbag module which deployed as a result of the head-on impact with the Blazer. The system operated properly and effectively. The driver who was also restrained by his lap and shoulder belt felt the airbag reduced his injuries.

HUMAN FACTORS / OCCUPANT DATA

DRIVER DATA

Age: 39
Sex: Male
Height: 74 Inches
Weight: 190 Pounds
Posture: Normal
Ejected: No
Entrapped: No
Manual Restraint
System Usage: Lap and Shoulder Belt
Passive Restraint
System Usage: Airbag
Vision: Normal
Physical State: Normal
Psychological
State: Normal
Vehicle
Familiarity: Daily
Route Familiarity: Unknown
Type of Treatment: Emergency Room
Days in Hospital: None
Work Days Lost: Unknown

DRIVER INJURIES

<u>Injury</u>	<u>Severity (AIS)</u>	<u>Source</u>
Fractured right forearm	AIS-2	Steering wheel
Multiple Contusion	AIS-1	Unknown
Multiple Abrasions	AIS-1	Unknown

Injury Coding

I.S.S. Body Region	O.I.C. Body Region	Aspect	Lesion	System Organ	A.I.S. Severity	Injury Source
5	R	R	F	S	2	04
6	O	W	C	I	1	97
6	O	W	A	I	1	97

PASSENGER DATA

Age: 36

Sex: Male

Height: 72 Inches

Weight: 175 Pounds

Posture: Normal

Ejected: No

Entrapped: No

Manual Restraint
System Usage: Lap and Shoulder Belt

Passive Restraint
System Usage: None

Type of Treatment: Emergency Room

Days in Hospital: None

PASSENGER INJURIES

<u>Injury</u>	<u>Severity (AIS)</u>	<u>Source</u>
Fracture right side rib	AIS-1	Unknown
Multiple contusions	AIS-1	Unknown

Injury Coding

I.S.S. Body Region	O.I.C. Body Region	Aspect	Lesion	System Organ	A.I.S. Severity	Injury Source
6	C	R	F	S	1	97
6	O	W	C	I	1	97

SELECTED PRINTS



1. Pre-impact direction of travel of the Chevrolet Caprice (airbag vehicle), west on U.S. Route



2. The Caprice enters the intersection with Alabama



3. Area of impact between the airbag vehicle and vehicle #2.



4. Final rest area of both vehicles.



5. Pre-impact travel of the Chevrolet Blazer (vehicle #2), east on U.S. Route



6. Vehicle #2 attempts a left turn to travel north on Alabama



7. Area of impact between vehicle #2 and the airbag vehicle.



8. View from the impact area looking toward the final rest area of both vehicles.



9. Frontal view of the airbag vehicle showing the damage sustained in the collision.



10. Left front view of the vehicle showing damage from the impact with vehicle #2.



11. Left rear three-quarter view of the Caprice.



12. Right front three-quarter view of the vehicle.



13. Interior view showing the deployed airbag and occupant contact to the lower left instrument panel.



14. Close-up view of the deployed airbag showing possible occupant contact.



15. View of occupant contact to the deployed airbag and the windshield.



16. Interior view showing possible occupant contact to the rearview mirror and glovebox.



17. Frontal view of vehicle #2 while under repair.



18. Rear view of vehicle #2.



19. Interior view of vehicle #2 showing occupant contact to the windshield and steering wheel.



20. Interior view of vehicle #2 showing deformation to the steering wheel rim from occupant contact.

SLIDE INDEX

NCSI 90-13

██████████, Alabama

SCENE:

- 1-3. Pre-impact direction of travel of the Chevrolet Caprice (airbag vehicle), west on U.S. Route ██████ in ██████, AL.
4. View of the area where the Caprice enters the intersection with State Route ██████
5. Area of impact with the Chevrolet Blazer (vehicle #2).
6. View of the final rest area of the Caprice.
- 7-9. Pre-impact direction of travel of vehicle #2, east on U.S. Route ██████ approaching the intersection with State Route ██████
10. Vehicle #2 attempts a left turn to travel north on State Route ██████
11. Area of impact with the Caprice.
12. View looking from the impact area toward the final rest area of vehicle #2.
13. Opposite view from beyond final rest of the vehicle looking toward the area of impact.

VEHICLES:

14. Frontal view of the Caprice showing the damage sustained in the head-on collision with vehicle #2.
15. Close-up view of the direct contact damage to the front left corner of the vehicle.
16. Left front view showing the crush to the airbag vehicle.
- 17-19. Left side views of the Caprice.
- 20-21. Right side views of the Caprice.
- 22-23. Views of the engine compartment of the Caprice.
- 24-27. Interior views of the left side driver's seating position showing possible occupant contact to the windshield, steering assembly, and lower dash.

SLIDE INDEX

NCSI 90-13

~~██████████~~ Alabama

VEHICLES CONT'D:

- 28. View of the center instrument panel showing possible occupant contact to the rearview mirror and dash.
- 29. Interior view of the right front passenger's seating position showing occupant contact to the glovebox.
- 30-32. Close-up views of the deployed driver side airbag.
- 33. Front left view of vehicle #2 after the vehicle had been dismantled for repair.
- 34. Left rear view of the Blazer.
- 35. Right front view of the Blazer.
- 36-37. View of the damaged components removed from the Blazer.
- 38-39. Interior view of vehicle #2 showing occupant contact to the windshield and steering wheel.



NC9013 #1



NC 9013 #2



NC 9013 #3



NC9013 #4



NC9013 #5



NC9013 #6



NC9013 #7



NC9013 #8



NC 9013 #9



NC9013 #10



NC9013 #11



NC9013 #12



NC 9013 #13



NC 9013 #14



NC9013 #15



NC9013 #16



NC9013 #17



NC9013 #18



NC 9013 #19



NC9013 #20



NC 9013 #21



NC9013 #22



NC 9013 #23
Best Available



NC9013 #24



NC9013 #25
Best Available



NC 9013 #26
Best Available



NC 9013 #27
Best Available



NC 9011 #28
Best Available



NC 9011 #29



NC9011 #30
Best Available



NC 9013 #31



NC9013 #32



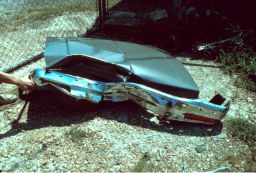
NC 9013 #33



NC 9013 #34



NC 9013 #35



NC 9013 #36



NC 9013 #37



NC 9013 #38



NC 9013 #39

Appendix A:
POLICE ACCIDENT REPORT

DPS
Accident No. 90- [REDACTED]

Sheet 1 of 2 Sheet(s)

Microfilm No.

Local Case No. _____

24

SEATING		Other Involved Unit (Circle One)										Other Involved Unit (Circle One)										CODES																																																																																																																																																									
Unit 1		<div style="display: flex; justify-content: space-around;"> <div>1 41 2 24 10</div> <div>12 - Pedestrian 13 - Rider of Domestic Animal 14 - Occ. of Non-Motorized Vehicle 15 - Victim of Other Circumstance/ Codes Not Applicable</div> <div>11</div> </div>										<div style="display: flex; justify-content: space-around;"> <div>2 22 3 10</div> <div>12 - Pedestrian 13 - Rider of Domestic Animal 14 - Occ. of Non-Motorized Vehicle 15 - Victim of Other Circumstance/ Codes Not Applicable</div> <div>11</div> </div>										Other Involved Safety Equipment																																																																																																																																																									
VICTIMS		Unit No. Seat Pos. Injury Type Age Sex Ejection First Aid By										SAP EQUIPMENT 01 - None Installed 95 - Not Applicable 99 - Unknown (Any Type) Lap Belt Only 11 - Fastened 12 - Not Fastened Lap/Shoulder Harness 21 - Lap Only Used 22 - Neither Used 23 - Shoulder Only Used 24 - Both Used Motorcycle Helmet 31 - None Used 32 - Used Passive Restraints 41 - Air Bag Deployed 42 - Air Bag Inoperative 71 - Auto Restraint Used 72 - Auto Restraint Inoperative Child Restraints 81 - Child Restraint Used 82 - Other Restraint Used 83 - None Used Pedal Cycle/Pedestrian 91 - Contrasting Clothing 92 - Non-contrasting Clothing																																																																																																																																																																			
N/A		Address: [REDACTED] Taken By: Police Dept [REDACTED] Taken By: Co Rescue [REDACTED]																																																																																																																																																																													
CODES		K - Killed B - Bruise/Abrasion/Swelling A - Visible or Carried from Scene C - Not Visible - Has Pain/Faint N - Not F - Fully P - Partially Ejected 1 - Trapped U - Unknown A - Not Applicable A - Ambulance Attended D - Doctor First Aid By M - Paramedic O - Other P - Police U - Unknown N - None																																																																																																																																																																													
NARRATIVE AND DIAGRAM		SEE Supplemental Sheet																																																																																																																																																																													
OFFICER'S OPINION OF WHAT HAPPENED:		Veh 1 WAS TRAVELING WEST ON U.S. Veh 2 WAS TRAVELING EAST ON U.S. AND STARTS TO MAKE LEFT TURN ONTO AL AND HITS VEH 1.																																																																																																																																																																													
ROADWAY ENVIRONMENT		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">For Each Roadway Environment Field, Circle One Entry For Each Involved Unit:</th> <th colspan="2">Contributing Road Defects</th> <th colspan="2">Surface Construction</th> <th colspan="2">Condition</th> <th colspan="2">Accident In or Related to Road Construction?</th> <th colspan="2">Material in Roadway (Contributing)</th> <th colspan="2">Material Source</th> <th colspan="2">Character</th> </tr> </thead> <tbody> <tr> <td>Unit 1</td> <td>1</td> <td>1 - Shoulders Low</td> <td>10 - Asphalt</td> <td>10 - Dry</td> <td>1 - None</td> <td>5 - Gravel</td> <td>1 - Not Applicable</td> <td>1 - Straight - Level</td> <td>6 - Curve - Down Grade</td> </tr> <tr> <td>Unit 2</td> <td>2</td> <td>2 - Shoulders High</td> <td>2 - Concrete</td> <td>2 - Wet</td> <td>2 - Rocks</td> <td>6 - Oil/Petrol</td> <td>2 - Natural Environment</td> <td>2 - Straight - Down Grade</td> <td>7 - Curve - Up Grade</td> </tr> <tr> <td></td> <td></td> <td>3 - Holes, Bumps, Etc.</td> <td>3 - Brick</td> <td>3 - Ice</td> <td>3 - Trees/Limbs</td> <td>8 - Other</td> <td>3 - Dropped from Vehicle</td> <td>3 - Straight - Up Grade</td> <td>8 - Curve - Hillcrest</td> </tr> <tr> <td></td> <td></td> <td>8 - Other</td> <td>4 - Unpaved</td> <td>4 - Snowy/Slushy</td> <td>4 - Dirt</td> <td></td> <td>4 - Already in Road, But Fell from Vehicle</td> <td>4 - Straight - Hillcrest</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>8 - Other</td> <td>8 - Other</td> <td></td> <td></td> <td>8 - Other</td> <td>5 - Curve - Level</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9 - Unknown</td> <td></td> <td></td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">Vision Obscured By:</th> <th colspan="4">Traffic Control</th> <th colspan="4">Opposing Lanes Separated By:</th> <th colspan="4">Trafficway Lanes</th> </tr> </thead> <tbody> <tr> <td>1 - Not Obscured</td> <td>10 - Blinded by Sunlight</td> <td>1 - Police Officer</td> <td>11 - Flagger</td> <td>97 - None</td> <td>1 - One Lane</td> </tr> <tr> <td>2 - Buildings</td> <td>11 - Fire/Smoke</td> <td>2 - R.R. Crossing Gates</td> <td>12 - No Passing Zone</td> <td>1 - Paved Surface</td> <td>2 - Two Lanes</td> </tr> <tr> <td>3 - Signboard</td> <td>12 - Dust</td> <td>3 - R.R. Flashing Lights</td> <td>97 - None</td> <td>2 - Unpaved Surface</td> <td>3 - Three Lanes</td> </tr> <tr> <td>4 - Trees, Crops, Bushes</td> <td>13 - Blinded by Headlights</td> <td>4 - R.R. Cross Bucks/Pave. 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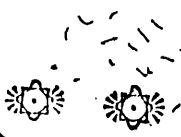
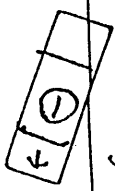


Diagram Not to Scale
Diagram Scale 1 inch

= (20 feet)
(10 feet)

Location

U.S.

Officer ID

Reporting Police Agency ORI

Time

5:04

A.M.
P.M.
MT.

DATE

Month Day Year

90

Appendix B:

NASS FORMS



U.S. Department of Transportation
National Highway Traffic Safety
Administration

CASE SUMMARY

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

PSU NCST CASE NO. 90-13 TYPE OF ACCIDENT CAR / UTILITY VEHICLE - HEAD-ON

A. DESCRIPTION OF THE ACCIDENT SEQUENCE AND ACCIDENT PECULIARITIES

(Provide a summary of the accident sequence as well as any particular event of the accident that is noteworthy. Injury mechanism and vehicle crashworthiness is the focus, not driver culpability. Do not include any personal identifiers. Use reverse side if needed.)

SEE SUMMARY p. 1

B. VEHICLE PROFILE(S)

Vehicle No.	Class of Vehicle	Year/Make/Model	Most Severe Damage		Component Failure
			Damage Plane	Severity Description	
1	LARGEST	91/CHEV/CAPRICE	FRONT	MODERATE	NONE
2	SHORT UTILITY	91/CHEV/BLAZER	FRONT	MODERATE	NONE

C. PERSON PROFILE(S)

Vehicle No.	Person Role	Seat Position	Restraint Use	Most Severe Injury			
				Body Region	Lesion	AIS	Injury Source
1	DRIVER	LEFT FRONT	AIRBAG	FOREARM	FRACTURE	2	STEERING WHEEL
1	PASSENGER	RIGHT FRONT	LAP & SHOULDER	RIBS	FRACTURE	1	UNKNOWN
2	DRIVER	LEFT FRONT	NONE	UNKNOWN			

DO NOT SANITIZE THIS FORM



U.S. Department of Transportation
National Highway Traffic Safety
Administration

ACCIDENT FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

<p>1. Primary Sampling Unit Number <u>NCSE</u></p> <p>2. Case Number – Stratum <u>90-13</u></p>	<p style="text-align: center;">SPECIAL STUDIES INDICATORS</p> <p>Check (✓) each special study (SS12-SS16 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.</p> <p>6. <u> </u> SS12 Not Active <u> 0 </u></p> <p>7. <u> </u> SS13 AOPS <u> 0 </u></p> <p>8. <u> </u> SS14 <u> </u> <u> 0 </u></p> <p>9. <u> </u> SS15 <u> </u> <u> 0 </u></p> <p>10. <u> </u> SS16 <u> </u> <u> 0 </u></p>																																										
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CODES FOR CLASS OF VEHICLE	CODES FOR GENERAL AREA OF DAMAGE (GAD)	
(00) Not a motor vehicle (01) Subcompact/mini (wheelbase 100") (02) Compact (wheelbase - 100"-104") (03) Intermediate (wheelbase - 105"-109") (04) Full size (wheelbase - 110"-114") (05) Largest (wheelbase - 115") (09) Unknown passenger car size (11) Short utility vehicle (12) Truck based utility (< 10,000 lbs GVWR) (13) Passenger van (< 10,000 lbs GVWR) (14) Other van (< 10,000 lbs GVWR) (15) Pickup truck (< 10,000 lbs GVWR) (18) Other truck (< 10,000 lbs GVWR) (19) Unknown light truck type (20) School bus (21) Other bus (22) Truck (< 10,000 lbs GVWR) (23) Tractor without trailer (24) Tractor-trailer(s) (25) Motored cycle (28) Other vehicle (99) Unknown	CDC APPLICABLE AND OTHER VEHICLES	TDC APPLICABLE VEHICLES
	(0) Not a motor vehicle (N) Noncollision (F) Front (R) Right side (L) Left side (B) Back (T) Top (U) Undercarriage (9) Unknown	(0) Not a motor vehicle (N) Noncollision (F) Front (R) Right side (L) Left side (B) Back of unit with cargo area (rear of trailer or straight truck) (D) Back (rear of tractor) (C) Rear of cab (V) Front of cargo area (T) Top (U) Undercarriage (9) Unknown
CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED		
(01-30) — Vehicle number Noncollision (31) Overturn — rollover (32) Fire or explosion (33) Jackknife (34) Other intraunit damage (specify): _____ (35) Noncollision injury (38) Other noncollision (specify): _____ (39) Noncollision — details unknown Collision with Fixed Object (41) Tree (< 4 inches in diameter) (42) Tree (< 4 inches in diameter) (43) Shrubbery or bush (44) Embankment (45) Breakaway pole or post (any diameter) Nonbreakaway Pole or Post (50) Pole or post (< 4 inches in diameter) (51) Pole or post (< 4 but < 12 inches in diameter) (52) Pole or post (< 12 inches in diameter) (53) Pole or post (diameter unknown) (54) Concrete traffic barrier (55) Impact attenuator (56) Other traffic barrier (specify): _____	(57) Fence (58) Wall (59) Building (60) Ditch or culvert (61) Ground (62) Fire hydrant (63) Curb (64) Bridge (68) Other fixed object (specify): _____ (69) Unknown fixed object Collision with Nonfixed Object (71) Motor vehicle not in-transport (72) Pedestrian (73) Cyclist or cycle (74) Other nonmotorist or conveyance (specify): _____ (75) Vehicle occupant (76) Animal (77) Train (78) Trailer, disconnected in transport (88) Other nonfixed object (specify): _____ (89) Unknown nonfixed object (98) Other event (specify): _____ (99) Unknown event or object	



U.S. Department of Transportation
National Highway Traffic Safety
Administration

ACCIDENT COLLISION MEASUREMENT TABLE

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Primary Sampling Unit Number <u>NCST</u>		Case Number—Stratum <u>90-13</u>
<p style="text-align: center;">ACCIDENT COLLISION DIAGRAM</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="text-align: center;">LEVEL I PHYSICAL EVIDENCE ABSENT</p> <p>To be accomplished when there is no physical evidence present at the scene:</p> <ul style="list-style-type: none"> * approximate vehicle orientation at impact and final rest * applicable road/roadway delineation (e.g., curbs/edge lines, lane markings, median markings, pavement markings, etc.) * applicable traffic controls (e.g., speed limit) * north arrow placed on diagram * sketch required <p style="text-align: center;">LEVEL II PHYSICAL EVIDENCE PRESENT</p> <p>In addition to the Level I tasks noted above, the following must be</p> </div> <div style="width: 45%;"> <p style="text-align: center;">LEVEL II (Cont'd) accomplished when physical evidence is present:</p> <ul style="list-style-type: none"> * document reference point and reference line relative to physical features present at the scene * scaled documentation of all accident induced physical evidence * scaled documentation of all roadside objects contacted * roadway surface type and condition of applicable roadways * grade measurements for all applicable roadways * scaled representations of the vehicle(s) at pre-impact, impact, and final rest based upon either: <ul style="list-style-type: none"> a) physical evidence, or b) reconstructed accident dynamics </div> </div>		

CRASH DATA

VEH. #1 VEH. #2 VEH. #3

Heading Angle 265° 85° _____

Surface Type ASPHALT _____

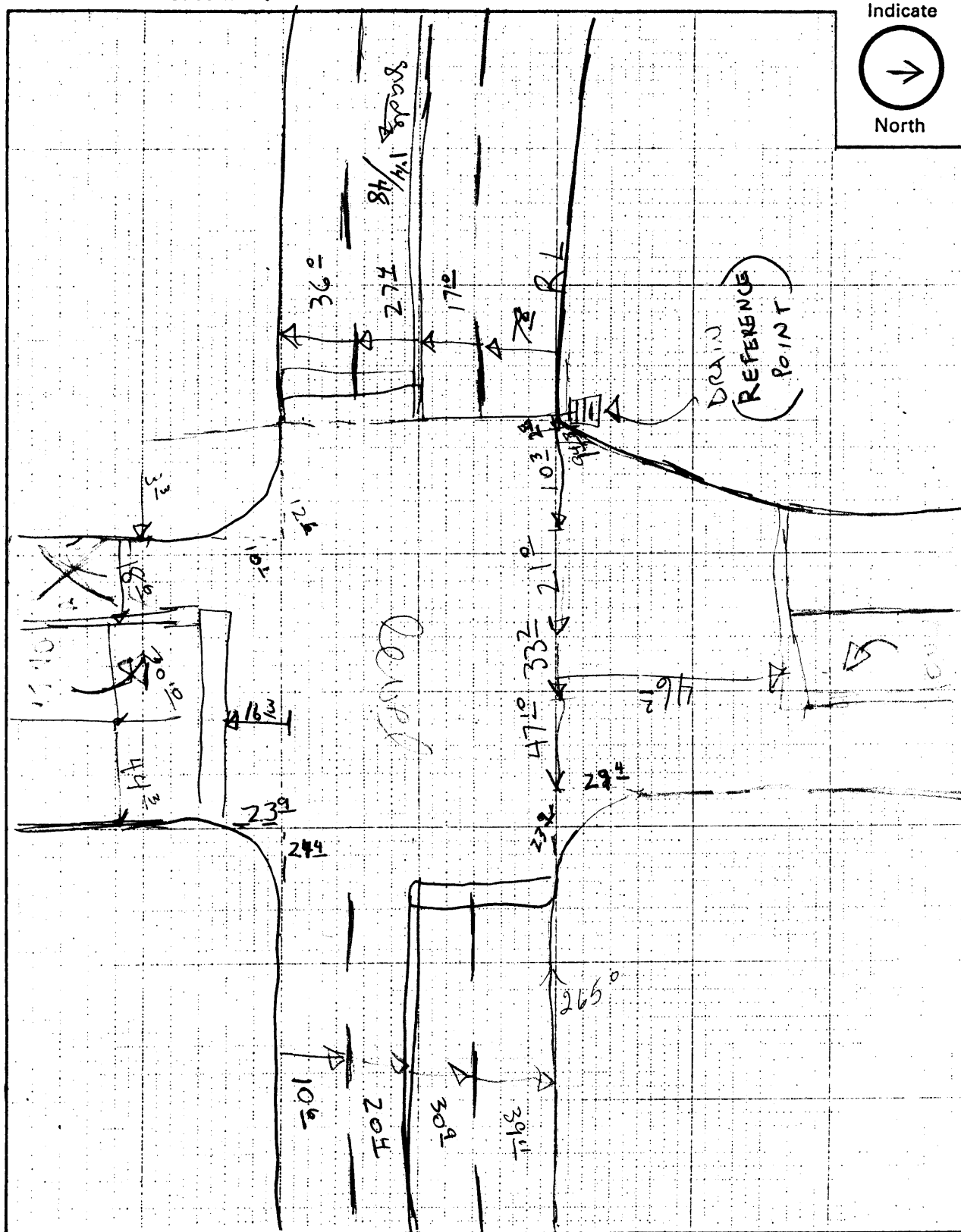
Surface Condition GOOD _____

Grade Measurement (v/h) 9/48 1 1/4/48 _____

**NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM**

PSU No. NC 51

Case Number-Stratum 90-13





US Department of Transportation
National Highway Traffic Safety
Administration

GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

<p>1. Primary Sampling Unit Number <u>NC5I</u></p> <p>2. Case Number—Stratum <u>90-13</u></p> <p>3. Vehicle Number <u>01</u></p> <p style="text-align: center;">VEHICLE IDENTIFICATION</p> <p>4. Vehicle Model Year <u>91</u> Code the last two digits of the model year (99) Unknown</p> <p>5. Vehicle Make (specify): <u>20</u> <u>CHEVROLET</u> Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual. (99) Unknown</p> <p>6. Vehicle Model (specify): <u>002</u> <u>CAPRICE CLASSIC</u> Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual. (999) Unknown</p> <p>7. Body Type <u>04</u> Note: Applicable codes are found on the back of this page.</p> <p>8. Vehicle Identification Number <u>1G1BN53E1M</u> XXXXXXXXXX Left justify; Slash zeros and letter Z (0 and Z) No VIN—Code all zeros Unknown—Code all nine's</p> <p style="text-align: center;">OFFICIAL RECORDS</p> <p>9. Police Reported Vehicle Disposition <u>1</u> (0) Not towed due to vehicle damage (1) Towed due to vehicle damage (9) Unknown</p> <p>10. Police Reported Travel Speed <u>35</u> Code to the nearest mph (NOTE: 00 means less than 0.5 mph) (97) 96.5 mph and above (99) Unknown</p>	<p>11. Police Reported Alcohol or Drug Presence' <u>0</u> (0) Neither alcohol nor drugs present (1) Yes (alcohol present) (2) Yes (drugs present) (3) Yes (alcohol and drugs present) (4) Yes (alcohol or drugs present—specifics unknown) (7) Not reported (8) No driver present (9) Unknown</p> <p>12. Alcohol Test Result for Driver <u>96</u> Code actual value (decimal implied before first digit—0.xx) (95) Test refused (96) None given (97) AC test performed, results unknown (98) No driver present (99) Unknown Source _____</p> <p style="text-align: center;">ACCIDENT RELATED</p> <p>13. Speed Limit <u>35</u> (00) No statutory limit Code posted or statutory speed limit (99) Unknown</p> <p>14. Attempted Avoidance Maneuver <u>99</u> (00) No impact (01) No avoidance actions (02) Braking (no lockup) (03) Braking (lockup) (04) Braking (lockup unknown) (05) Releasing brakes (06) Steering left (07) Steering right (08) Braking and steering left (09) Braking and steering right (10) Accelerating (11) Accelerating and steering left (12) Accelerating and steering right (97) No driver present (98) Other action (specify): _____ (99) Unknown</p> <p>15. Accident Type <u>69</u> Applicable codes may be found on the back of page two of this field form (00) No impact Code the number of the diagram that best describes the accident circumstance (98) Other accident type (specify): _____ (99) Unknown</p>
<p>**** STOP HERE IF GV07 DOES NOT EQUAL 01-49 ****</p>	

OCCUPANT RELATED16. Driver Presence in Vehicle 1

- (0) Driver not present
(1) Driver present
(9) Unknown

17. Number of Occupants This Vehicle 02

- (00-96) Code actual number of occupants for this vehicle
(97) 97 or more
(99) Unknown

18. Number of Occupant Forms Submitted 02**VEHICLE WEIGHT ITEMS**19. Vehicle Curb Weight 03,900

~~3878~~ Code weight to nearest 100 pounds.

- (010) Less than 1050 pounds
(135) 13,500 lbs or more
(999) Unknown

Source: [REDACTED]

20. Vehicle Cargo Weight 0,000

Code weight to nearest 100 pounds.

- (00) Less than 50 pounds
(97) 9,650 lbs or more
(99) Unknown

RECONSTRUCTION DATA21. Towed Trailing Unit 0

- (0) No towed unit
(1) Yes—towed trailing unit
(9) Unknown

22. Documentation of Trajectory Data for This Vehicle 0

- (0) No
(1) Yes

23. Post Collision Condition of Tree or Pole (for Highest Delta V) 0

- (0) Not collision (for highest delta V) with tree or pole
(1) Not damaged
(2) Cracked/sheared
(3) Tilted <45 degrees
(4) Tilted ≥45 degrees
(5) Uprooted tree
(6) Separated pole from base
(7) Pole replaced
(8) Other (specify):

(9) Unknown

24. Rollover 0

- (0) No rollover (no overturning)

Rollover (primarily about the longitudinal axis)

- (1) Rollover, 1 quarter turn only
(2) Rollover, 2 quarter turns
(3) Rollover, 3 quarter turns
(4) Rollover, 4 or more quarter turns (specify):

- (5) Rollover—end-over-end (i.e., primarily about the lateral axis)
(9) Rollover (overturn), details unknown

OVERRIDE/UNDERRIDE (THIS VEHICLE)25. Front Override/Underride (this vehicle) 026. Rear Override/Underride (this vehicle) 0

- (0) No override/underride, or not an end-to-end impact

Override (see specific CDC)

- (1) 1st CDC
(2) 2nd CDC
(3) Other not automated CDC (specify):

Underride (see specific CDC)

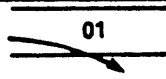
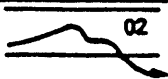
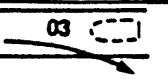
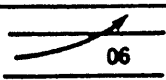
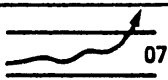
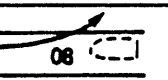
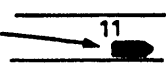
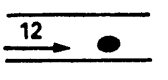
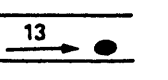
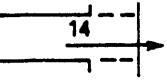
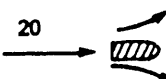
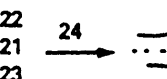
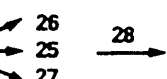
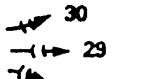
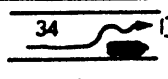
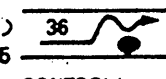
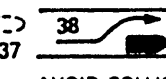
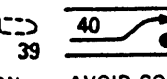
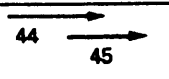

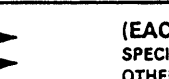
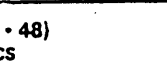

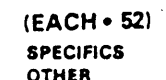

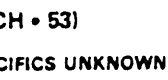


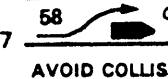
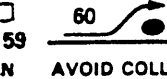

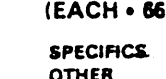

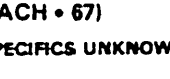
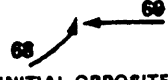
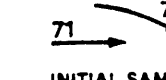
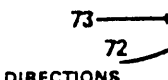

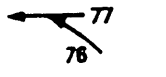
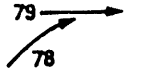
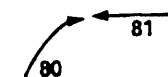
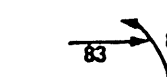
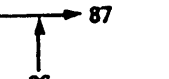
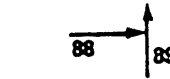

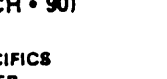
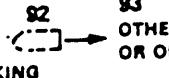
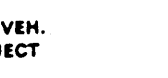

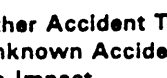
- (4) 1st CDC
(5) 2nd CDC
(6) Other not automated CDC (specify):

- (7) Medium/heavy truck override
(9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value
(997) Noncollision
(998) Impact with object
(999) Unknown

27. Heading Angle for This Vehicle 27028. Heading Angle for Other Vehicle 60

Category	Configuration	ACCIDENT TYPES (Includes Intent)					
I. Single Driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B. Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C. Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II. Same Trafficway Same Direction	D. Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 25, 26, 27	 24 DECEL. 28, 30, 31	 26 AVOID COLLISION WITH VEH.	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN
	E. Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe Angle	 44 45	 46 45 47	 48 45 47	 49 45 47	(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN
III. Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	 51 LATERAL MOVE	 52 LATERAL MOVE	 53 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN
	H. Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe Angle	 64 LATERAL MOVE	 65 LATERAL MOVE	 66 LATERAL MOVE	 67 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN
IV. Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 70 INITIAL SAME DIRECTIONS	 72 INITIAL SAME DIRECTIONS	 73 INITIAL SAME DIRECTIONS	(EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN
	K. Turn Into Path	 76 TURN INTO SAME DIRECTION	 78 TURN INTO SAME DIRECTION	 80 TURN INTO OPPOSITE DIRECTIONS	 82 TURN INTO OPPOSITE DIRECTIONS	(EACH • 84) SPECIFICS OTHER	(EACH • 85) SPECIFICS UNKNOWN
V. Intersecting Paths (Vehicle Damage)	L. Straight Paths	 87 88	 88 89	 89 89	 90 89	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN
VI. Miscellaneous	M. Backing Etc.	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	 94 OTHER VEH. OR OBJECT	 95 OTHER VEH. OR OBJECT	96 Other Accident Type 99 Unknown Accident Type 00 No Impact	

National Accident Sampling System – Crashworthiness Data System: General Vehicle Form

Page 3

29. Basis for Total Delta V (Highest) 1

Delta V Calculated

- (1) CRASH program – damage only routine
- (2) CRASH program – damage and trajectory routine
- (3) Missing vehicle algorithm

Delta V Not Calculated

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction techniques, regardless of adequacy of damage data.
- (6) All vehicles and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

30. Total Delta V Secondary Highest 15
14.9 Nearest mph _____

(NOTE: 00 means less than 0.5 mph)
 (97) 96.5 mph and above
 (99) Unknown

31. Longitudinal Component of Delta V + 13
-12.9 Nearest mph _____

(NOTE: 00 means greater than -0.5 and less than +0.5 mph)
 (± 97) ± 96.5 mph and above
 (— 99) Unknown

32. Lateral Component of Delta V Secondary Highest 08
7.5 Nearest mph _____

(NOTE: 00 means greater than -0.5 and less than +0.5 mph)
 (± 97) ± 96.5 mph and above
 (— 99) Unknown

33. Energy Absorption 53498.4 053500
 _____ Nearest 100 foot-lbs _____

(NOTE: 0000 means less than 50 Foot-Lbs)
 (9997) 999,650 foot-lbs or more
 (9999) Unknown

34. Confidence in Reconstruction Program Results (for Highest Delta V) 1
- (0) No reconstruction
 - (1) Collision fits model—results appear reasonable
 - (2) Collision fits model—results appear high
 - (3) Collision fits model—results appear low
 - (4) Borderline reconstruction—results appear reasonable

35. Type of Vehicle Inspection 1
- (0) No Inspection
 - (1) Complete inspection
 - (2) Partial inspection (specify): _____

36. Is this an AOPS Vehicle? 1
- (0) No
 - (1) Yes

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), ***
 DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

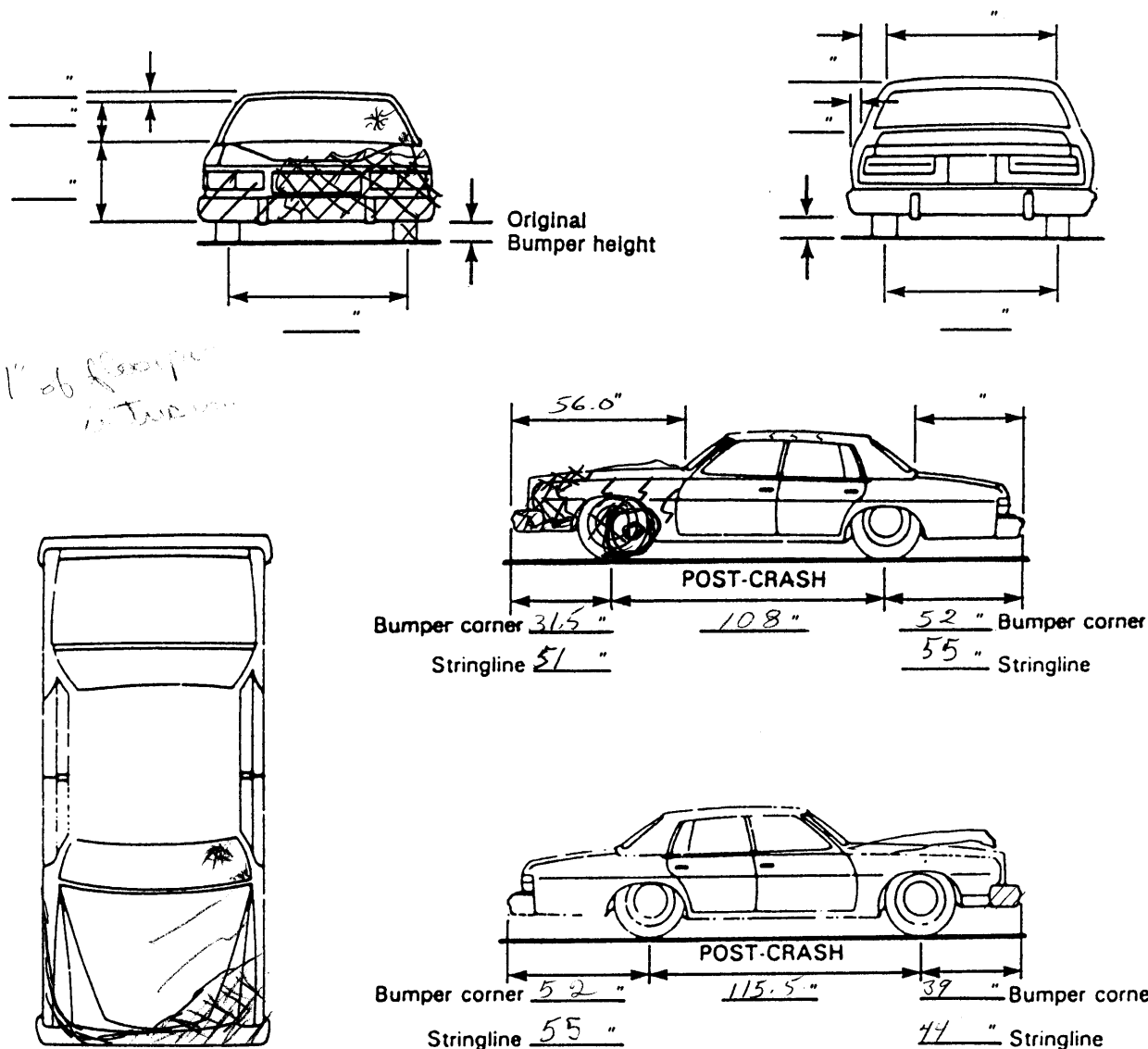
HS Form 435A (Rev. 1/90)

National Accident Sampling System—Crashworthiness Data System: Exterior Vehicle Form

2

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted RF <u>2</u> LF <u>1</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		ORIGINAL SPECIFICATIONS Wheelbase <u>115.9</u> Overall Length <u>214.1</u> Maximum Width <u>77.0</u> Curb Weight <u>3898</u> Average Track <u>61.8/60.7</u> Front Overhang <u>44</u> Rear Overhang <u>55</u> Engine Size: cyl./ displ. _____ Undeformed End Width <u>66</u>		WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF + _____° LF <u>205</u> ° RR + _____° LR + _____° Within +5 degrees
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic		DRIVE WHEELS <input type="checkbox"/> FWD <input checked="" type="checkbox"/> RWD <input type="checkbox"/> 4WD		
		Approximate Cargo Weight <u>- 0 -</u>		



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewall, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

CDC WORKSHEET

CODES FOR OBJECT CONTACTED

01-30 – Vehicle Number

Noncollision

- (31) Overturn – rollover
 (32) Fire or explosion
 (33) Jackknife
 (34) Other intraunit damage (specify):

- (35) Noncollision injury
 (38) Other noncollision (specify):

(39) Noncollision – details unknown

Collision with Fixed Object

- (41) Tree (≤ 4 inches in diameter)
 (42) Tree (> 4 inches in diameter)
 (43) Shrubbery or bush
 (44) Embankment

(45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (≤ 4 inches in diameter)
 (51) Pole or post (> 4 but ≤ 12 inches in diameter)
 (52) Pole or post (> 12 inches in diameter)
 (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
 (55) Impact attenuator
 (56) Other traffic barrier (specify):

- (57) Fence
 (58) Wall
 (59) Building
 (60) Ditch or Culvert
 (61) Ground
 (62) Fire hydrant
 (63) Curb
 (64) Bridge
 (68) Other fixed object (specify):

(69) Unknown fixed object

Collision With Nonfixed Object

- (71) Motor vehicle not in transport
 (72) Pedestrian
 (73) Cyclist or cycle
 (74) Other nonmotorist or conveyance (specify):

- (75) Vehicle occupant
 (76) Animal
 (77) Train
 (78) Trailer, disconnected in transport
 (88) Other nonfixed object (specify):

(89) Unknown nonfixed object

(98) Other event (specify):

(99) Unknown event or object

DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	-20	00	F	Y	E	W	02
---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---
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COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>11</u>	7. <u>F</u>	8. <u>Y</u>	9. <u>E</u>	10. <u>W</u>	11. <u>02</u>

Second Highest Delta "V"

12. ____	13. ____	14. ____	15. ____	16. ____	17. ____	18. ____	19. ____
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CRUSH PROFILE

(The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. ALL MEASUREMENTS ARE IN INCHES.)

HIGHEST DELTA "V"

20. L	21. C1	C2	C3	C4	C5	C6	22. - - D
<u>066</u>	<u>18</u>	<u>15</u>	<u>09</u>	<u>09</u>	<u>03</u>	<u>01</u>	<u>000</u>

Second Highest Delta "V"

23. L	24. C1	C2	C3	C4	C5	C6	25. + - D
____	____	____	____	____	____	____	____

26. Are CDCs Documented but Not Coded on The Automated File
(0) No
(1) Yes

0

27. Researcher's Assessment of Vehicle Disposition
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

1

28. Original Wheelbase
____ Code to the nearest tenth of an inch (9999) Unknown

1159

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED ***
(I.E., GV09 = 0 OR 9), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



U.S. Department of Transportation
National Highway Traffic Safety
Administration

INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

NC 51

2. Case Number—Stratum

90-13

3. Vehicle Number

01

INTEGRITY

4. Passenger Compartment Integrity

00

(00) No integrity loss

Yes, Integrity Was Lost Through

(01) Windshield

(02) Door (side)

(03) Door/hatch (rear)

(04) Roof

(05) Roof glass

(06) Side window

(07) Rear window

(08) Roof and roof glass

(09) Windshield and door (side)

(10) Windshield and roof

(11) Side and rear window

(12) Windshield and side window

(13) Door and side window

(98) Other combination of above (specify):

(99) Unknown

Door, Tailgate Or Hatch Opening

5. LF 1 6. RF 1 7. LR 1 8. RR 1 9. TG/H 0

(0) No door/gate/hatch

(1) Door/gate/hatch remained closed and operational

(2) Door/gate/hatch came open during collision

(3) Door/gate/hatch jammed shut

(8) Other (specify):

(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then Code 0.

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate, or Hatch Came Open During Collision

(1) Door operational (no damage)

(2) Latch/striker failure due to damage

(3) Hinge failure due to damage

(4) Door structure failure due to damage

(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage

(6) Latch/striker and hinge failure due to damage

(8) Other failure (specify):

(9) Unknown

GLAZING

Glazing Damage from Impact Forces

15. WS 1 16. LF 0 17. RF 0 18. LR 0 19. RR 0

20. BL 0 21. Roof 8 22. Other 8

(0) No glazing damage from impact forces

(2) Glazing in place and cracked from impact forces

(3) Glazing in place and holed from impact forces

(4) Glazing out-of-place (cracked or not) and not holed from impact forces

(5) Glazing out-of-place and holed from impact forces

(6) Glazing disintegrated from impact forces

(7) Glazing removed prior to accident

(8) No glazing

(9) Unknown if damaged

Glazing Damage from Occupant Contact

23. WS 2 24. LF 0 25. RF 0 26. LR 0 27. RR 0

28. BL 0 29. Roof 0 30. Other 0

(0) No occupant contact to glazing or no glazing

(1) Glazing contacted by occupant but no glazing damage

(2) Glazing in place and cracked by occupant contact

(3) Glazing in place and holed by occupant contact

(4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact

(5) Glazing out-of-place by occupant contact and holed by occupant contact

(6) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

If No Glazing Damage *And* No Occupant Contact or No Glazing, Then Code IV 31 Through IV 46 As 0

Type of Window/Windshield Glazing

31. WS 1 32. LF 0 33. RF 0 34. LR 0 35. RR 0

36. BL 0 37. Roof 0 38. Other 0

(0) No glazing contact and no damage, or no glazing

(1) AS-1 — Laminated

(2) AS-2 — Tempered

(3) AS-3 — Tempered-tinted

(4) AS-14 — Glass/Plastic

(8) Other (specify):

(9) Unknown

Window Precrash Glazing Status

39. WS 1 40. LF 0 41. RF 0 42. LR 0 43. RR 0

44. BL 0 45. Roof 0 46. Other 0

(0) No glazing contact and no damage, or no glazing

(1) Fixed

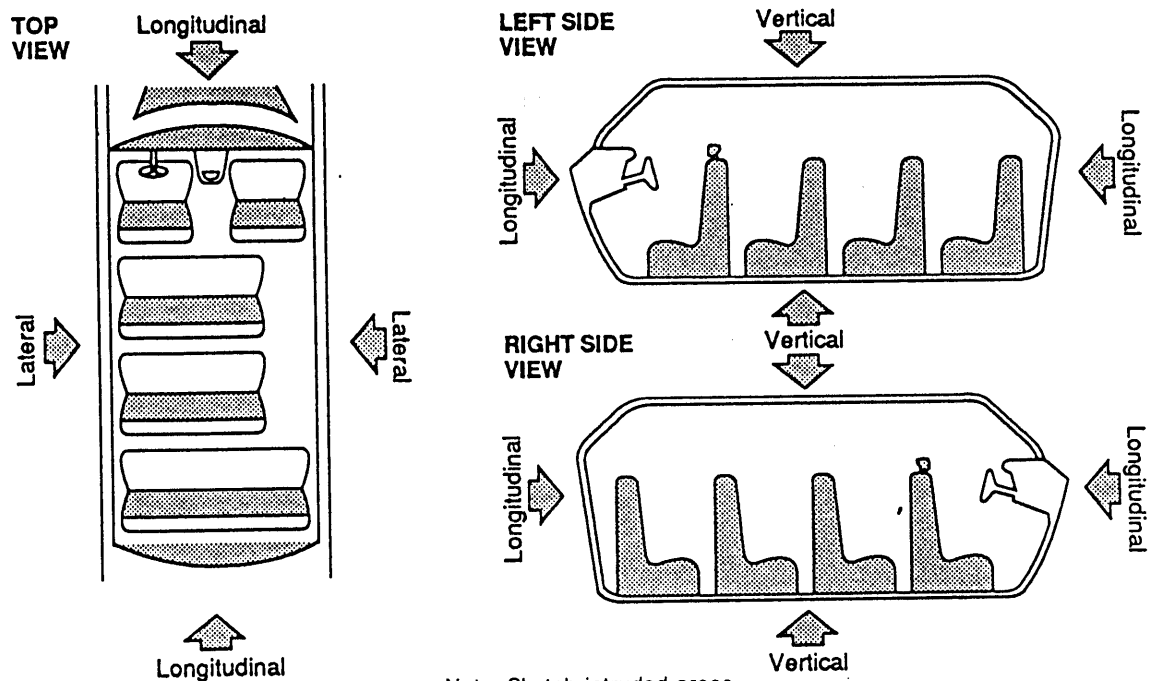
(2) Closed

(3) Partially opened

(4) Fully opened

(9) Unknown

INTRUSION WORK SHEET



LOCATION OF INTRUSION	INTRUDED COMPONENT	COMPARISON VALUE	-	INTRUDED VALUE	=	INTRUSION	DOMINANT CRUSH DIRECTION
11	TOE PAN	45	-	44	=	1"	Longitudinal
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		
			-		=		

Document no more than the 15 most severe intrusions

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV 47-IV 86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. <u>1</u> <u>1</u>	48. <u>0</u> <u>5</u>	49. <u>1</u>	50. <u>2</u>
2nd	51. _____	52. _____	53. _____	54. _____
3rd	55. _____	56. _____	57. _____	58. _____
4th	59. _____	60. _____	61. _____	62. _____
5th	63. _____	64. _____	65. _____	66. _____
6th	67. _____	68. _____	69. _____	70. _____
7th	71. _____	72. _____	73. _____	74. _____
8th	75. _____	76. _____	77. _____	78. _____
9th	79. _____	80. _____	81. _____	82. _____
10th	83. _____	84. _____	85. _____	86. _____

LOCATION OF INTRUSION**Front Seat**

- (11) Left
(12) Middle
(13) Right

Fourth Seat

- (41) Left
(42) Middle
(43) Right

Second Seat

- (21) Left
(22) Middle
(23) Right

- (97) Catastrophic
(98) Other enclosed area (specify): _____

(99) Unknown

Third Seat

- (31) Left
(32) Middle
(33) Right

INTRUDING COMPONENT**Interior Components**

- (01) Steering assembly
(02) Instrument panel left
(03) Instrument panel center
(04) Instrument panel right
(05) Toe pan
(06) A-pillar
(07) B-pillar
(08) C-pillar
(09) D-pillar
(10) Door panel
(12) Roof (or convertible top)
(13) Roof side rail
(14) Windshield
(15) Windshield header
(16) Window frame
(17) Floor pan
(18) Backlight header
(19) Front seat back
(20) Second seat back
(21) Third seat back
(22) Fourth seat back
(23) Fifth seat back
(24) Seat cushion
(25) Back panel or door surface
(26) Other interior component (specify): _____

- (27) Side panel - forward of the A-pillar
(28) Side panel - rear of the A-pillar

Exterior Components

- (30) Hood
(31) Outside surface of vehicle (specify): _____

- (32) Other exterior object in the environment (specify): _____

- (33) Unknown exterior object

- (97) Catastrophic

- (98) Intrusion of unlisted component(s) (specify): _____

- (99) Unknown

MAGNITUDE OF INTRUSION

- (1) ≥ 1 inch but < 3 inches
(2) ≥ 3 inches but < 6 inches
(3) ≥ 6 inches but < 12 inches
(4) ≥ 12 inches but < 18 inches
(5) ≥ 18 inches but < 24 inches
(6) ≥ 24 inches
(7) Catastrophic
(9) Unknown

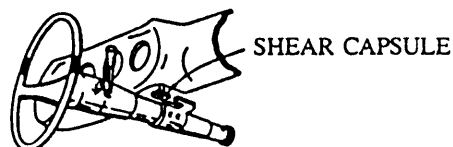
DOMINANT CRUSH DIRECTION

- (1) Vertical
(2) Longitudinal
(3) Lateral
(7) Catastrophic
(9) Unknown

STEERING COLUMN WORKING DIAGRAMS

STEERING COLUMN COLLAPSE

Steering Column Shear Module Movement

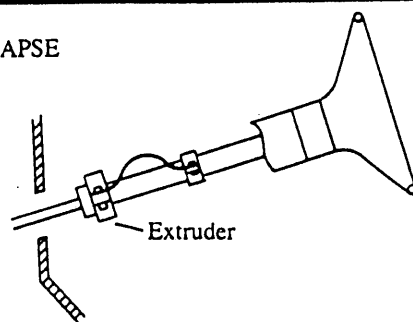


SHEAR CAPSULE



Left — Right — V = ———"

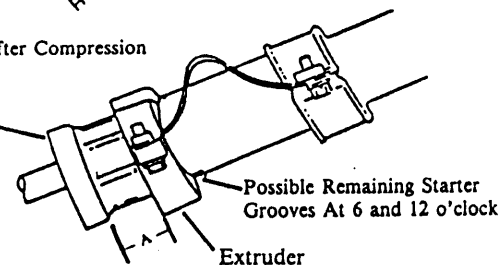
Direction and Magnitude of Steering Column Movement



Extruder

After Compression

Flare Tube



Possible Remaining Starter Grooves At 6 and 12 o'clock

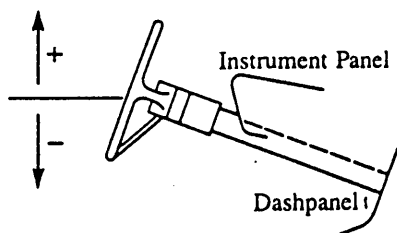
Extruder

Compression = Measurement A

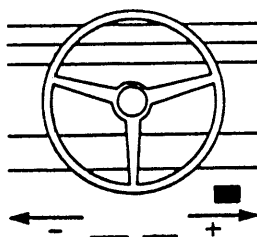
A = ———

STEERING COLUMN MOVEMENT

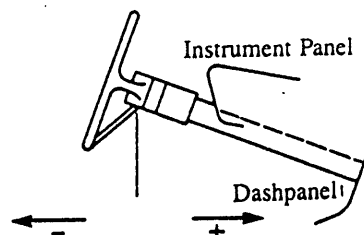
Vertical Movement



Lateral Movement



Longitudinal Movement



	COMPARISON VALUE	—	DAMAGED VALUE	=	MOVEMENT
VERTICAL		—	0	=	
LATERAL		—	0	=	
LONGITUDINAL		—	0	=	

STEERING RIM/SPOKE DEFORMATION

COMPARISON VALUE	—	DAMAGED VALUE	=	DEFORMATION
	—	0	=	
	—		=	

National Accident Sampling System—Crashworthiness Data System: Interior Vehicle Form

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STEERING COLUMN

87. Steering Column Type 2

- (1) Fixed column
 (2) Tilt column
 (3) Telescoping column
 (4) Tilt and telescoping column
 (8) Other column type (specify): _____

(9) Unknown

If PDOF \neq 11, 12 or 1, Then Code IV88-IV91 As 9688. Steering Column Collapse Due to Occupant Loading 00

_____ Code actual measured movement to the nearest inch. See coding manual for measurement technique(s).

(00) No movement, compression, or collapse

(01-19) Actual measured value

(20) 20 inches or greater

Estimated movement from observation

(81) Less than 1 inch

(82) ≥ 1 inch but < 2 inches(83) ≥ 2 inches but < 4 inches(84) ≥ 4 inches but < 6 inches(85) ≥ 6 inches but < 8 inches

(86) Greater than or equal to 8 inches

(96) Not assessed (PDOF \neq 11, 12, 1)

(97) Apparent movement, value undetermined or cannot be measured or estimated

(98) Nonspecified type column

(99) Unknown

Direction And Magnitude of Steering Column Movement

89. Vertical Movement + 0090. Lateral Movement + 0091. Longitudinal Movement + 00

Code the actual measured movement to the nearest inch. See Coding Manual for measurement technique(s)

(00) No steering column movement

($\pm 01 - \pm 49$) Actual measured value(± 50) 50 inches or greater

Estimated movement from observation

(± 81) ≥ 1 inch but < 3 inches(± 82) ≥ 3 inches but < 6 inches(± 83) ≥ 6 inches but < 12 inches(± 84) ≥ 12 inches(__96) Not assessed (PDOF \neq 11, 12, 1)(__97) Apparent movement > 1 inch but cannot be measured or estimated

(__99) Unknown

92. Steering Rim/Spoke Deformation 0

_____ Code actual measured deformation to the nearest inch.

(0) No steering rim deformation

(1-5) Actual measured value

(6) 6 inches or more

(8) Observed deformation cannot be measured

(9) Unknown

93. Location of Steering Rim/Spoke Deformation 00

(00) No steering rim deformation

Quarter Sections

(01) Section A

(02) Section B

(03) Section C

(04) Section D



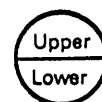
Half Sections

(05) Upper half of rim/spoke

(06) Lower half of rim/spoke

(07) Left half of rim/spoke

(08) Right half of rim/spoke



(09) Complete steering wheel collapse

(10) Undetermined location

(99) Unknown

INSTRUMENT PANEL

94. Odometer Reading 006,000

5,992 miles—Code mileage to the nearest 1,000 miles

(000) No odometer

(001) Less than 1,500 miles

(300) 299,500 miles or more

(999) Unknown

Source: _____

95. Instrument Panel Damage from Occupant Contact? 1

(0) No

(1) Yes

(9) Unknown

96. Knee Bolsters Deformed from Occupant Contact? 8

(0) No

(1) Yes

(8) Not present

(9) Unknown

97. Did Glove Compartment Door Open During Collision(s)? 1

(0) No

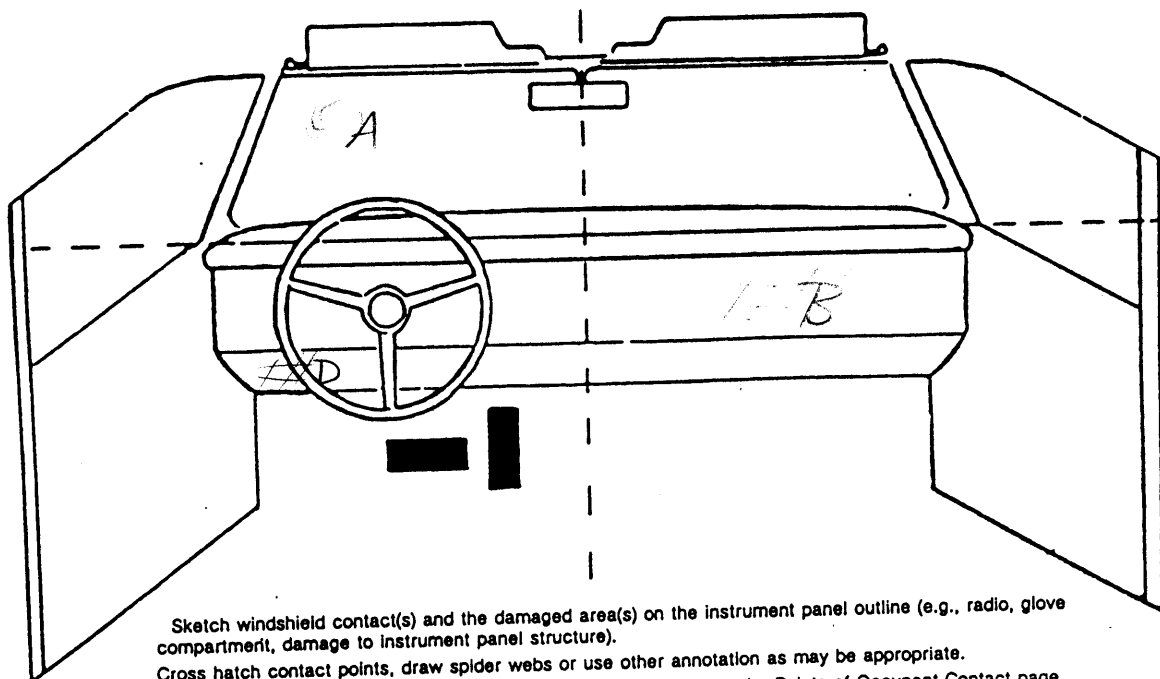
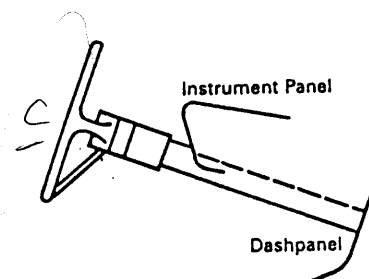
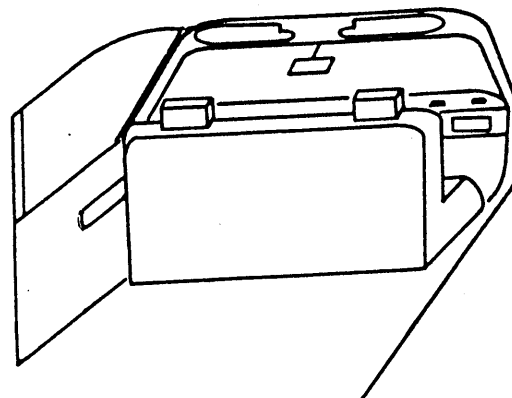
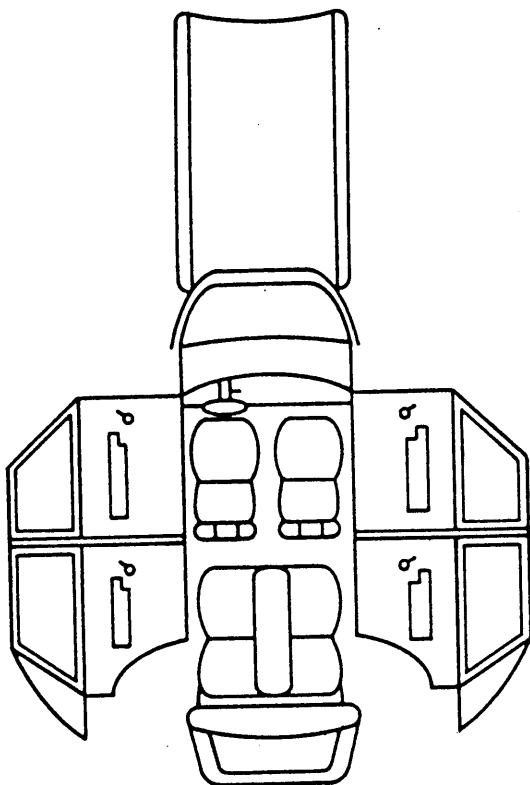
(1) Yes

(8) Not present

(9) Unknown

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).
 Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.
 Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	01	1	Head/Arm	Spiderweb Cracked	1
B	12	2	Knees	Cracked	1
C	45	1		Blow	1
D	09	1	Knees	Cracked	1
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					

CODES FOR INTERIOR COMPONENTS

FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify): _____

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify): _____
- (25) Left side window glass or frame

- (26) Left side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (27) Other left side object (specify): _____

RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify): _____
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (37) Other right side object (specify): _____

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): _____
- (44) Head restraint system
- (45) Air bag
- (46) Other occupants (specify): _____
- (47) Interior loose objects

- (48) Child safety seat (specify): _____

- (49) Other interior object (specify): _____

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor including toe pan
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): _____

CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
- (2) Probable
- (3) Possible
- (4) Unknown

MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attributes for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	3	4
	Use	04	00	04
	Failure Modes	1	0	1
SECOND	Availability	4	3	4
	Use	00	00	00
	Failure Modes	0	0	0
THIRD	Availability	/		
	Use			
	Failure Modes			
OTHER	Availability			
	Use			
	Failure Modes			

Manual (Active) Belt System Availability

- (0) Not available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available — type unknown
- (8) Other belt (specify):

(9) Unknown

Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used — type unknown

(08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat — type unknown
- (18) Other belt used with child safety seat (specify):

(99) Unknown if belt used

Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):

(8) Other manual belt failure (specify):

(9) Unknown

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

1. Type of Child Safety Seat

- (0) No child safety seat
 (1) Infant seat
 (2) Toddler seat
 (3) Convertible seat
 (4) Booster seat
 (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
 (9) Unknown if child safety seat used

2. Child Safety Seat Orientation

- (00) No child safety seat
 Designed for Rear Facing for This Age/Weight
 (01) Rear facing
 (02) Forward facing
 (03) Other orientation (specify):

- (04) Unknown orientation

- Designed for Forward Facing for This Age/Weight
 (11) Rear facing
 (12) Forward facing
 (18) Other orientation (specify):

- (19) Unknown orientation

- Unknown Design or Orientation for This Age/Weight, or Unknown Age/Weight
 (21) Rear facing
 (22) Forward facing
 (28) Other orientation (specify):

- (29) Unknown orientation

- (99) Unknown if child safety seat used

3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage

5. Child Safety Seat Tether Usage

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used

- (02) After market harness/shield/tether used

- (03) Child safety seat used, but no after market harness/shield/tether added

- (09) Unknown if harness/shield/tether added or used

Designed with Harness/Shield/Tether

- (11) Harness/shield/tether not used

- (12) Harness/shield/tether used

- (19) Unknown if harness/shield/tether used

Unknown if Designed with Harness/Shield/Tether

- (21) Harness/shield/tether not used

- (22) Harness/shield/tether used

- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model

(Specify make/model and occupant number)

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attributes for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
F I R S T	Head Restraint Type/Damage	3	0	3
	Seat Type	06	06	06
	Seat Performance	1	1	1
S E C O N D	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
T H I R D	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
O T H E R	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			

Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other (specify): _____
- (9) Unknown

Seat Type (This Occupant Position)

- (00) No seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., van type)
- (09) Other seat type (specify): _____
- (99) Unknown

Seat Performance (This Occupant Position)

- (0) No seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks failed
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____

- (7) Combination of above (specify): _____
- (8) Other (specify): _____

- (9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E. UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indications that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No [☒] Yes []

Describe indications of ejection and body parts involved in partial ejection(s):

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

Ejection

- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

Ejection Area

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

(7) Roof

- (8) Other area (e.g., back of pickup, etc.) (specify):

- (9) Unknown

Ejection Medium

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify):

(5) Integral structure

- (8) Other medium (specify):

- (9) Unknown

Medium Status (Immediately Prior to Impact)

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

ENTRAPMENT No [☒] Yes []

Describe entrapment mechanism: _____

Component(s): _____

(Note in vehicle interior diagram)



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U.S. Department of Transportation
National Highway Traffic Safety
AdministrationForm Approved
O.M.B. No. 2127-0021NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

NCST

2. Case Number—Stratum

90-13

3. Vehicle Number

01

4. Occupant Number

01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

39

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height

74

Code actual height to the nearest inch.

(99) Unknown

8. Occupant's Weight

190

Code actual weight to the nearest pound.

(999) Unknown

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

10. Occupant's Seat Position

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

(1) Abnormal posture (specify):

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection

(0) No ejection

(1) Complete ejection

(2) Partial ejection

(3) Ejection, unknown degree

(9) Unknown

13. Ejection Area

(0) No ejection

(1) Windshield

(2) Left front

(3) Right front

(4) Left rear

(5) Right rear

(6) Rear

(7) Roof

(8) Other area (e.g., back of pickup, etc.)

(specify):

(9) Unknown

14. Ejection Medium

(0) No ejection

(1) Door/hatch/tailgate

(2) Nonfixed roof structure

(3) Fixed glazing

(4) Nonfixed glazing (specify):

(5) Integral structure

(8) Other medium (specify):

(9) Unknown

15. Medium Status (Immediately Prior to Impact)

(0) No ejection

(1) Open

(2) Closed

(3) Integral structure

(9) Unknown

16. Entrapment

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

(0) Not entrapped

(1) Entrapped

(9) Unknown

RESTRAINT SYSTEM AND SEAT EVALUATION**17. Manual (Active) Belt System Availability** 4

- (0) Not available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown
- (8) Other belt (specify): _____

(9) Unknown

18. Manual (Active) Belt System Use 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify): _____

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used

19. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown

20. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

- (6) Broken retractor
- (7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown

21. Automatic (Passive) Restraint System Availability 1

- (0) Not equipped/not available
- (1) Airbag
- (2) Airbag disconnected (specify): _____

- (3) Airbag not reinstalled
- (4) 2 point automatic belts
- (5) 3 point automatic belts
- (6) Automatic belts destroyed or rendered inoperative
- (9) Unknown

22. Automatic (Passive) Restraint Function 4

- (0) Not equipped/not available

Automatic Belt

- (1) Automatic belt in use
- (2) Automatic belt not in use
- (3) Automatic belt use unknown

Air Bag

- (4) Airbag deployed during accident
- (5) Airbag deployed inadvertently just prior to accident
- (6) Deployed, accident sequence undetermined
- (7) Nondeployed
- (8) Unknown if deployed
- (9) Unknown

23. Did Automatic (Passive) Restraint Fail? 1

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): _____

(9) Unknown

24. Police Reported Restraint Use 7

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): AIR BAG DEPLOYED

- (8) Restrained, type unknown
- (9) Police indicated "unknown"

25. Head Restraint Type/Damage by Occupant at This Occupant Position 3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): _____

(9) Unknown

National Accident Sampling System—Crashworthiness Data System: Occupant Assessment Form

Page 3

26. Seat Type (This Occupant Position) 04

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., van type)
- (09) Other seat type (specify):

(99) Unknown

27. Seat Performance (This Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):

(7) Combination of above (specify):

(8) Other (specify):

(9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 000

- (000) No child safety seat
- Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual
- (997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

- (00) No child safety seat

Designed for Rear Facing for This Age/Weight

- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):

(09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation for This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00

Note: Options below applicable to Variables OA31-OA33.

- (00) No child safety seat

Not Designed with
Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed with Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed with Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES**34. Injury Severity (Police Rating)**2

- (0) O—No injury
- (1) C—Possible injury
- (2) B—Nonincapacitating injury
- (3) A—Incapacitating injury
- (4) K—Killed
- (5) U—Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment—Mortality4

- (0) No treatment
- (1) Fatal
- (2) Fatal—ruled disease
- Nonfatal
- (3) Hospitalized
- (4) Transported and released
- (5) Treatment at scene—nontransported
- (6) Treatment later
- (8) Treatment—other (specify):

(9) Unknown

36. Type of Medical Facility (for Initial Treatment)2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

(9) Unknown

37. Hospital stay00

- Code number of days (up through 60) that the occupant stayed in the hospital
- (00) Not hospitalized
- (61) 61 days or more
- (99) Unknown

38. Working Days Lost99

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

39. Time to Death00

- Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal—ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death00**41. 2nd Medically Reported Cause of Death**00**42. 3rd Medically Reported Cause of Death**00

- Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (97) Other result (specify):

(99) Unknown

43. Number of Recorded Injuries for This Occupant03

- Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

UPDATE CANDIDATE

NO ☒YES ☐

*** STOP HERE ***

IF THERE ARE NO RECORDED INJURIES

(I.E., OA43=00, 97, 99)



U.S. Department of Transportation
National Highway Traffic Safety
Administration

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

OCCUPANT INJURY FORM

1. Primary Sampling Unit Number

NCSI

3. Vehicle Number

01

2. Case Number—Stratum

90-13

4. Occupant Number

01

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.—A.I.S.				Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion No.		
		Body Region	Aspect	Lesion	System Organ				A.I.S. Severity	
1st	5. <u>5</u>	6. <u>R</u>	7. <u>R</u>	8. <u>F</u>	9. <u>5</u>	10. <u>2</u>	11. <u>04</u>	12. <u>2</u>	13. <u>2</u>	14. ____
2nd	15. <u>6</u>	16. <u>0</u>	17. <u>W</u>	18. <u>C</u>	19. <u>I</u>	20. <u>1</u>	21. <u>97</u>	22. <u>9</u>	23. <u>9</u>	24. ____
3rd	25. <u>6</u>	26. <u>0</u>	27. <u>W</u>	28. <u>A</u>	29. <u>I</u>	30. <u>1</u>	31. <u>97</u>	32. <u>9</u>	33. <u>9</u>	34. ____
4th	35. ____	36. ____	37. ____	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____
5th	45. ____	46. ____	47. ____	48. ____	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____
6th	55. ____	56. ____	57. ____	58. ____	59. ____	60. ____	61. ____	62. ____	63. ____	64. ____
7th	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____	71. ____	72. ____	73. ____	74. ____
8th	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____	82. ____	83. ____	84. ____
9th	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____	93. ____	94. ____
10th	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____	104. ____

SOURCE OF INJURY DATA**OFFICIAL**

- (1) Autopsy records with or without hospital medical records
- (2) Hospital medical records other than emergency room (eg. discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify):
- (9) Police

INJURY SOURCE**FRONT**

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add-on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify):

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame

- (26) Left side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (27) Other left side object (specify):

RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, roof side rail
- (37) Other right side object (specify):

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify):
- (44) Head restraint system
- (45) Air bag
- (46) Other occupants (specify):
- (47) Interior loose objects
- (48) Child safety seat (specify):
- (49) Other interior object (specify):

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor including toe pan
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

EXTERIOR OF OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify):
- (68) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify):
- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify):
- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify):

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (83) Unknown exterior of other motor vehicle
- (84) Ground
- (85) Other vehicle or object (specify):
- (86) Unknown vehicle or object

NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify):
- (97) Injured, unknown source

INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OCCUPANT INJURY CLASSIFICATION**O.I.C. Body Region**

- (M) Abdomen
- (N) Ankle-foot
- (A) Arm (upper)
- (B) Back-thoracolumbar spine
- (C) Chest
- (E) Elbow
- (F) Face
- (R) Forearm
- (H) Head-skull
- (U) Injured, unknown region
- (K) Knee
- (L) Leg (lower)
- (Y) Lower limb(s) (whole or unknown part)
- (N) Neck-cervical spine
- (P) Pelvic-hip
- (S) Shoulder
- (T) Thigh
- (Q) Upper limb(s) (whole or unknown part)
- (O) Whole body

(W) Wrist-hand**Aspect of Injury**

- (A) Anterior-front
- (B) Bilateral (rib fracture only)
- (C) Central
- (I) Inferior-lower
- (U) Injured, unknown aspect
- (L) Left
- (P) Posterior-back
- (R) Right
- (S) Superior-upper
- (W) Whole region

Lesion

- (A) Abrasion
- (M) Amputation
- (V) Avulsion
- (B) Burn
- (K) Concussion
- (C) Contusion
- (N) Crush

- (G) Detachment, separation
- (D) Dislocation
- (F) Fracture
- (Z) Fracture and dislocation
- (U) Injured, unknown lesion
- (L) Laceration
- (O) Other
- (P) Perforation, puncture
- (R) Rupture
- (S) Sprain
- (T) Strain
- (E) Total severance, transection

System/Organ

- (W) All systems in region
- (A) Arteries-veins
- (B) Brain
- (D) Digestive
- (E) Ears
- (O) Eye
- (H) Heart
- (U) Injured, unknown system

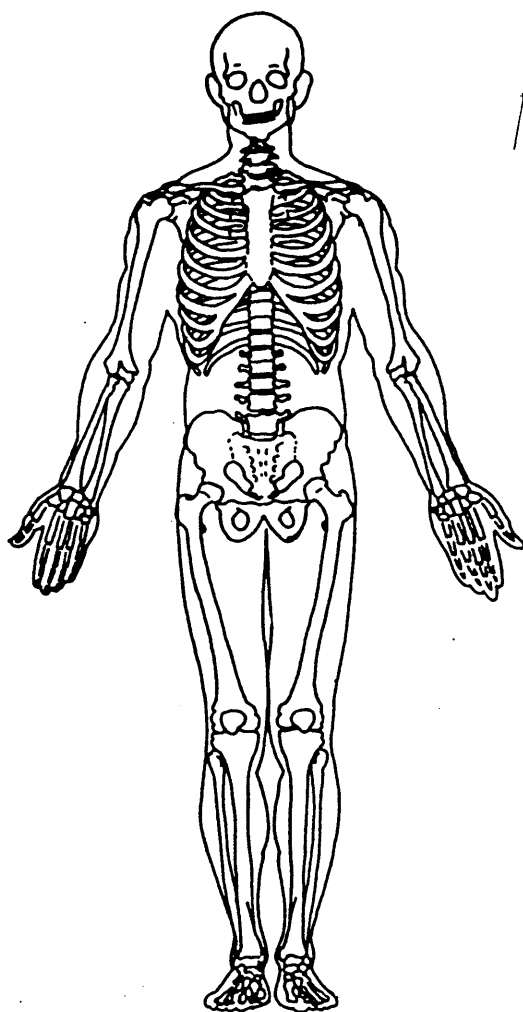
- (I) Integumentary
- (J) Joints
- (K) Kidneys
- (L) Liver
- (M) Muscles
- (N) Nervous system
- (P) Pulmonary-lungs
- (R) Respiratory
- (S) Skeletal
- (C) Spinal cord
- (Q) Spleen
- (T) Thyroid, other endocrine gland
- (G) Urogenital
- (V) Vertebrae

Abbreviated Injury Scale

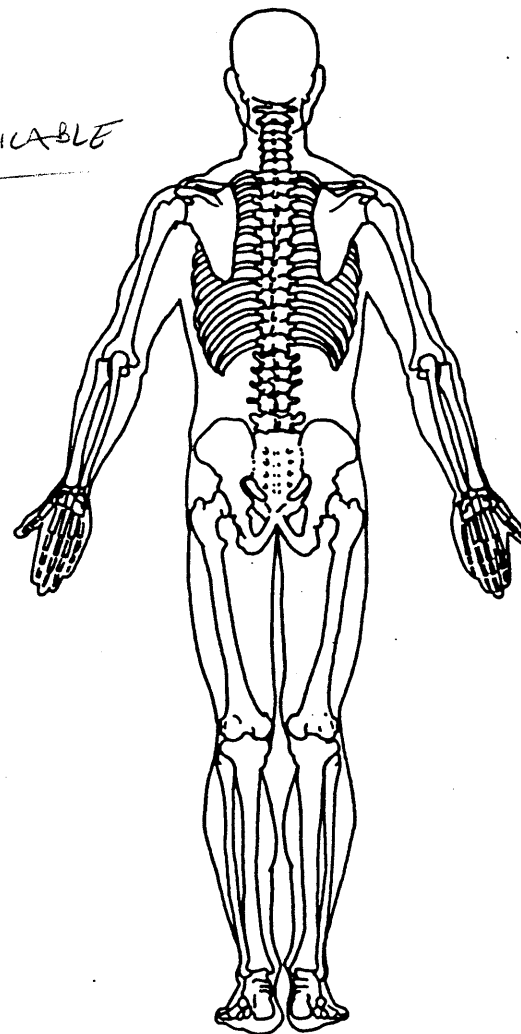
- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

OFFICIAL INJURY DATA – SKELETAL INJURIES

Indicate the *Location, Lesion, Detail* (size, depth, fracture type, head injury clinical signs and neurological deficits), and *Source* of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

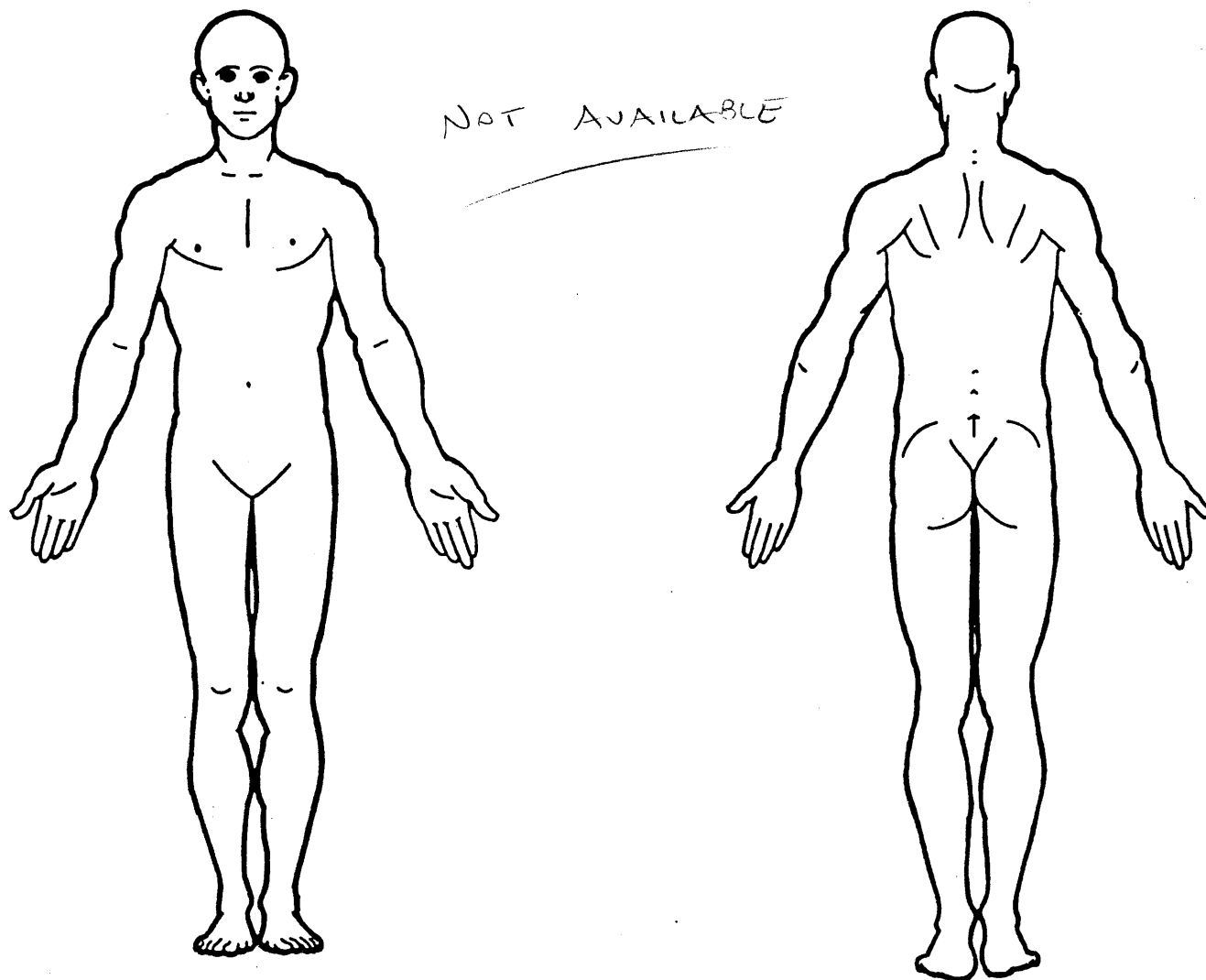


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OFFICIAL INJURY DATA—SOFT TISSUE INJURIES

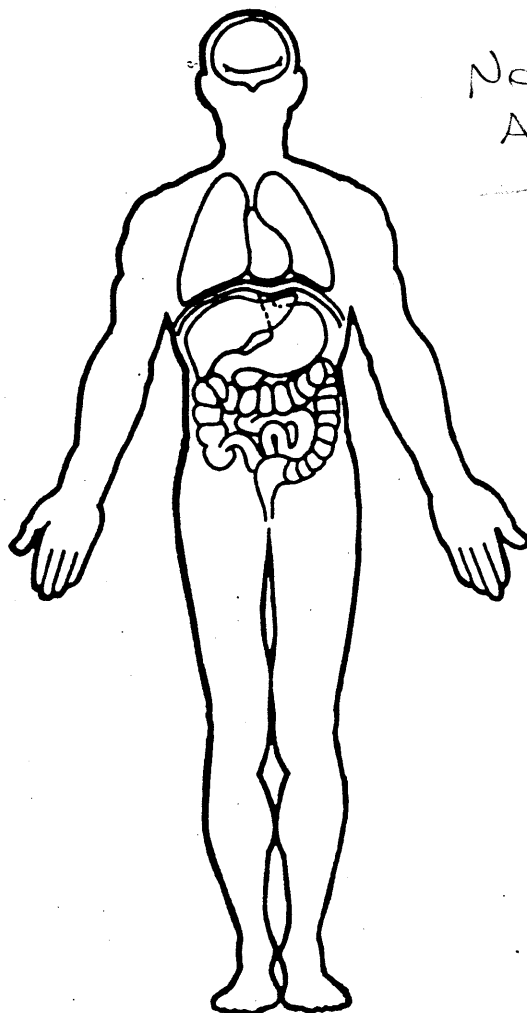
Indicate the *Location, Lesion, Detail* (size, depth, fracture type, head injury clinical signs and neurological deficits), and *Source* of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



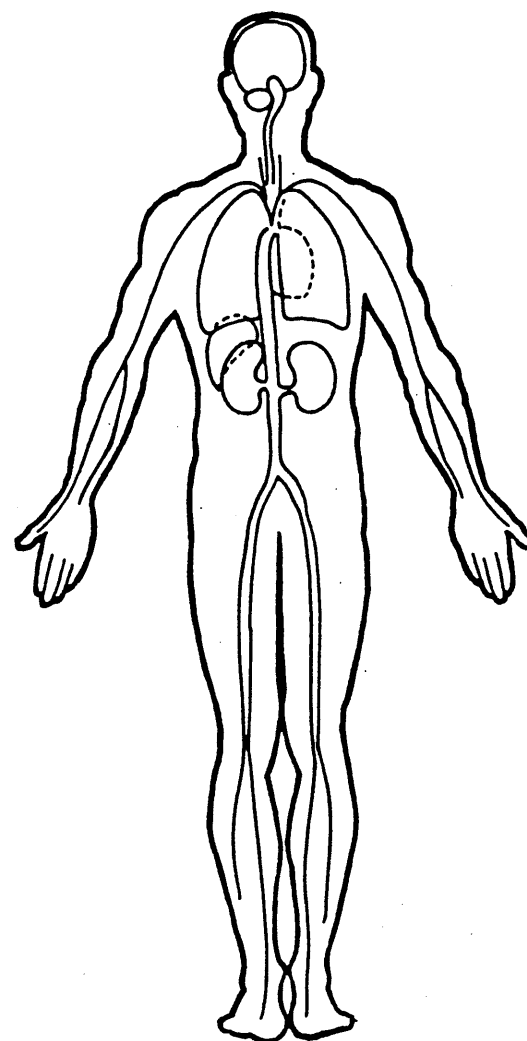
OFFICIAL INJURY DATA — INTERNAL INJURIES

BEST AVAILABLE COPY

Indicate the *Location, Lesion, Detail* (size, depth, fracture type, head injury clinical signs and neurological deficits), and *Source* of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



NOT
AVAILABLE





OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number <u>NCST</u>	11. Occupant's Posture <u>0</u> (0) Normal posture (1) Abnormal posture (specify): _____ (9) Unknown
2. Case Number—Stratum <u>90-13</u>	
3. Vehicle Number <u>01</u>	
4. Occupant Number <u>02</u>	EJECTION/ENTRAPMENT
OCCUPANT'S CHARACTERISTICS	
5. Occupant's Age <u>36</u> Code actual age at time of accident. (00) Less than one year old (specify by month): _____ (97) 97 years and older (99) Unknown	12. Ejection <u>0</u> (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown
6. Occupant's Sex <u>1</u> (1) Male (2) Female (9) Unknown	13. Ejection Area <u>0</u> (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back of pickup, etc.) (specify): _____ (9) Unknown
7. Occupant's Height <u>6'</u> <u>72</u> Code actual height to the nearest inch. (99) Unknown	14. Ejection Medium <u>0</u> (0) No ejection (1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify): _____ (5) Integral structure (8) Other medium (specify): _____ (9) Unknown
8. Occupant's Weight <u>175</u> <u>175</u> Code actual weight to the nearest pound. (999) Unknown	15. Medium Status (Immediately Prior to Impact) <u>0</u> (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown
9. Occupant's Role <u>2</u> (1) Driver (2) Passenger (9) Unknown	16. Entrapment <u>0</u> (NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.) (0) Not entrapped (1) Entrapped (9) Unknown
10. Occupant's Seat Position <u>13</u> Front Seat (11) Left side (12) Middle (13) Right side (14) Other (specify): _____ Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify): _____ Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): _____ Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify): _____ (97) In or on unenclosed area (98) Other seat (specify): _____ (99) Unknown	

RESTRAINT SYSTEM AND SEAT EVALUATION**17. Manual (Active) Belt System Availability** 4

- (0) Not available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown
- (8) Other belt (specify): _____

(9) Unknown

18. Manual (Active) Belt System Use 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify): _____

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used

19. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown

20. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

- (6) Broken retractor
- (7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown

21. Automatic (Passive) Restraint System Availability 0

- (0) Not equipped/not available
- (1) Airbag
- (2) Airbag disconnected (specify): _____

- (3) Airbag not reinstalled
- (4) 2 point automatic belts
- (5) 3 point automatic belts
- (6) Automatic belts destroyed or rendered inoperative
- (9) Unknown

22. Automatic (Passive) Restraint Function 0

- (0) Not equipped/not available

Automatic Belt

- (1) Automatic belt in use
- (2) Automatic belt not in use
- (3) Automatic belt use unknown

Air Bag

- (4) Airbag deployed during accident
- (5) Airbag deployed inadvertently just prior to accident
- (6) Deployed, accident sequence undetermined
- (7) Nondeployed
- (8) Unknown if deployed
- (9) Unknown

23. Did Automatic (Passive) Restraint Fail? 0

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): _____

(9) Unknown

24. Police Reported Restraint Use 4

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): _____

- (8) Restrained, type unknown
- (9) Police indicated "unknown"

25. Head Restraint Type/Damage by Occupant at This Occupant Position 3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): _____

(9) Unknown

National Accident Sampling System—Crashworthiness Data System: Occupant Assessment Form

Page 3

26. Seat Type (This Occupant Position) 04

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., van type)
- (09) Other seat type (specify):

(99) Unknown

27. Seat Performance (This Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):

(7) Combination of above (specify):

(8) Other (specify):

(9) Unknown

CHILD SAFETY SEAT28. Child Safety Seat Make/Model 000

(000) No child safety seat
Applicable codes are found in your NASS CDS
Data Collection, Coding, and Editing Manual
(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

(8) Unknown child safety seat type
(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

(00) No child safety seat

Designed for Rear Facing for This Age/Weight

- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):

(09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation for This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00

Note: Options below applicable to
Variables OA31-OA33.

(00) No child safety seat

Not Designed with

Harness/Shield/Tether

(01) After market harness/shield/tether added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market harness/shield/tether added

(09) Unknown if harness/shield/tether added or used

Designed with Harness/Shield/Tether

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

Unknown If Designed with Harness/Shield/Tether

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

National Accident Sampling System—Crashworthiness Data System: Occupant Assessment Form

Page 4

INJURY CONSEQUENCES34. Injury Severity (Police Rating) 2

- (0) O—No injury
- (1) C—Possible injury
- (2) B—Nonincapacitating injury
- (3) A—Incapacitating injury
- (4) K—Killed
- (5) U—Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment—Mortality 4

- (0) No treatment
- (1) Fatal
- (2) Fatal—ruled disease

Nonfatal

- (3) Hospitalized
- (4) Transported and released
- (5) Treatment at scene—nontransported
- (6) Treatment later
- (8) Treatment—other (specify):

(9) Unknown

36. Type of Medical Facility (for Initial Treatment) 2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

(9) Unknown

37. Hospital stay 00

- Code number of days (up through 60) that the occupant stayed in the hospital
- (00) Not hospitalized
 - (61) 61 days or more
 - (99) Unknown

38. Working Days Lost 99

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
 - (61) 61 days or more
 - (62) Fatally injured
 - (97) Not working prior to accident
 - (99) Unknown

39. Time to Death 00

- Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
 - (96) Fatal—ruled disease
 - (99) Unknown

40. 1st Medically Reported Cause of Death 0041. 2nd Medically Reported Cause of Death 0042. 3rd Medically Reported Cause of Death 00

- Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
 - (97) Other result (specify):

(99) Unknown

43. Number of Recorded Injuries for This Occupant 02

- Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
 - (97) Injured, details unknown
 - (99) Unknown if injured

UPDATE CANDIDATE

NO ☒YES ☐

*** STOP HERE ***

IF THERE ARE NO RECORDED INJURIES
(I.E., OA43=00, 97, 99)



U.S. Department of Transportation
National Highway Traffic Safety
Administration

Form Approved
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

OCCUPANT INJURY FORM

1. Primary Sampling Unit Number

NCSE

3. Vehicle Number

01

2. Case Number—Stratum

90-13

4. Occupant Number

02

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.—A.I.S.				Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion No.	
		Body Region	Aspect	Lesion	System Organ					A.I.S. Severity
1st	5. <u>3</u>	6. <u>C</u>	7. <u>R</u>	8. <u>F</u>	9. <u>5</u>	10. <u>1</u>	11. <u>97</u>	12. <u>9</u>	13. <u>9</u>	14. <u> </u>
2nd	15. <u>6</u>	16. <u>0</u>	17. <u>W</u>	18. <u>C</u>	19. <u>I</u>	20. <u>1</u>	21. <u>97</u>	22. <u>9</u>	23. <u>9</u>	24. <u> </u>
3rd	25. <u> </u>	26. <u> </u>	27. <u> </u>	28. <u> </u>	29. <u> </u>	30. <u> </u>	31. <u> </u>	32. <u> </u>	33. <u> </u>	34. <u> </u>
4th	35. <u> </u>	36. <u> </u>	37. <u> </u>	38. <u> </u>	39. <u> </u>	40. <u> </u>	41. <u> </u>	42. <u> </u>	43. <u> </u>	44. <u> </u>
5th	45. <u> </u>	46. <u> </u>	47. <u> </u>	48. <u> </u>	49. <u> </u>	50. <u> </u>	51. <u> </u>	52. <u> </u>	53. <u> </u>	54. <u> </u>
6th	55. <u> </u>	56. <u> </u>	57. <u> </u>	58. <u> </u>	59. <u> </u>	60. <u> </u>	61. <u> </u>	62. <u> </u>	63. <u> </u>	64. <u> </u>
7th	65. <u> </u>	66. <u> </u>	67. <u> </u>	68. <u> </u>	69. <u> </u>	70. <u> </u>	71. <u> </u>	72. <u> </u>	73. <u> </u>	74. <u> </u>
8th	75. <u> </u>	76. <u> </u>	77. <u> </u>	78. <u> </u>	79. <u> </u>	80. <u> </u>	81. <u> </u>	82. <u> </u>	83. <u> </u>	84. <u> </u>
9th	85. <u> </u>	86. <u> </u>	87. <u> </u>	88. <u> </u>	89. <u> </u>	90. <u> </u>	91. <u> </u>	92. <u> </u>	93. <u> </u>	94. <u> </u>
10th	95. <u> </u>	96. <u> </u>	97. <u> </u>	98. <u> </u>	99. <u> </u>	100. <u> </u>	101. <u> </u>	102. <u> </u>	103. <u> </u>	104. <u> </u>

SOURCE OF INJURY DATA**OFFICIAL**

- (1) Autopsy records with or without hospital medical records
- (2) Hospital medical records other than emergency room (eg. discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify):
- (9) Police

INJURY SOURCE**FRONT**

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add-on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify):

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame

- (26) Left side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail
- (27) Other left side object (specify):

RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, roof side rail
- (37) Other right side object (specify):

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify):
- (44) Head restraint system
- (45) Air bag
- (46) Other occupants (specify):
- (47) Interior loose objects
- (48) Child safety seat (specify):
- (49) Other interior object (specify):

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor including toe pan
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

EXTERIOR OF OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify):
- (68) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify):
- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify):
- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify):

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (83) Unknown exterior of other motor vehicle
- (84) Ground
- (85) Other vehicle or object (specify):

NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify):
- (97) Injured, unknown source

INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OCCUPANT INJURY CLASSIFICATION**O.I.C. Body Region**

- (M) Abdomen
- (O) Ankle-foot
- (A) Arm (upper)
- (B) Back-thoracolumbar spine
- (C) Chest
- (E) Elbow
- (F) Face
- (R) Forearm
- (H) Head-skull
- (U) Injured, unknown region
- (K) Knee
- (L) Leg (lower)
- (Y) Lower limb(s) (whole or unknown part)
- (N) Neck-cervical spine
- (P) Pelvic-hip
- (S) Shoulder
- (T) Thigh
- (Q) Upper limb(s) (whole or unknown part)
- (O) Whole body

(W) Wrist-hand**Aspect of Injury**

- (A) Anterior-front
- (B) Bilateral (rib fracture only).
- (C) Central
- (I) Inferior-lower
- (U) Injured, unknown aspect
- (L) Left
- (P) Posterior-back
- (R) Right
- (S) Superior-upper
- (W) Whole region

Lesion

- (A) Abrasion
- (M) Amputation
- (V) Avulsion
- (B) Burn
- (K) Concussion
- (C) Contusion
- (N) Crush

(G) Detachment, separation

- (D) Dislocation
- (F) Fracture
- (Z) Fracture and dislocation
- (U) Injured, unknown lesion
- (L) Laceration
- (O) Other
- (P) Perforation, puncture
- (R) Rupture
- (S) Sprain
- (T) Strain
- (E) Total severance, transection

System/Organ

- (W) All systems in region
- (A) Arteries-veins
- (B) Brain
- (D) Digestive
- (E) Ears
- (O) Eye
- (H) Heart
- (U) Injured, unknown system

(I) Integumentary

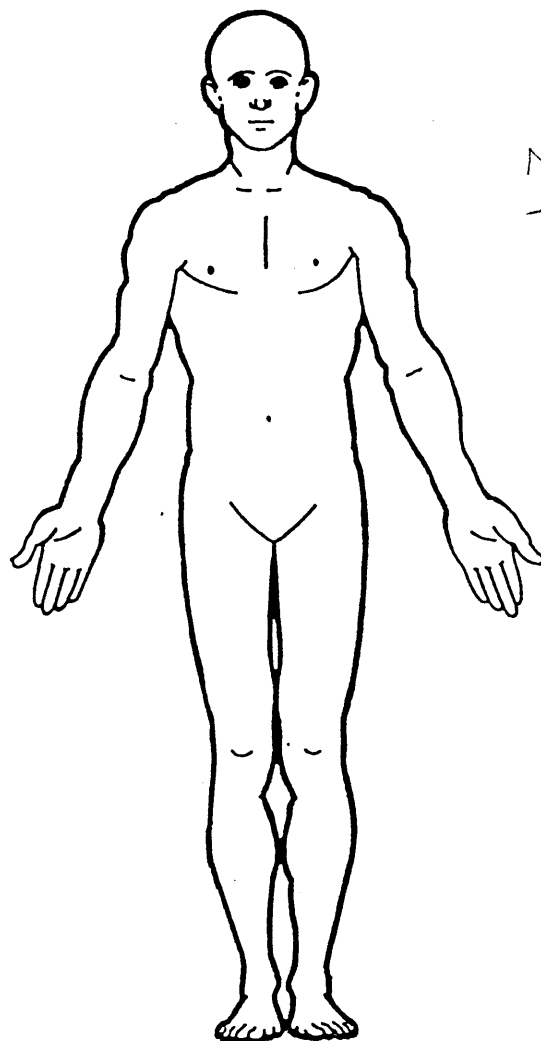
- (J) Joints
- (K) Kidneys
- (L) Liver
- (M) Muscles
- (N) Nervous system
- (P) Pulmonary-lungs
- (R) Respiratory
- (S) Skeletal
- (C) Spinal cord
- (Q) Spleen
- (T) Thyroid, other endocrine gland
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Abbreviated Injury Scale

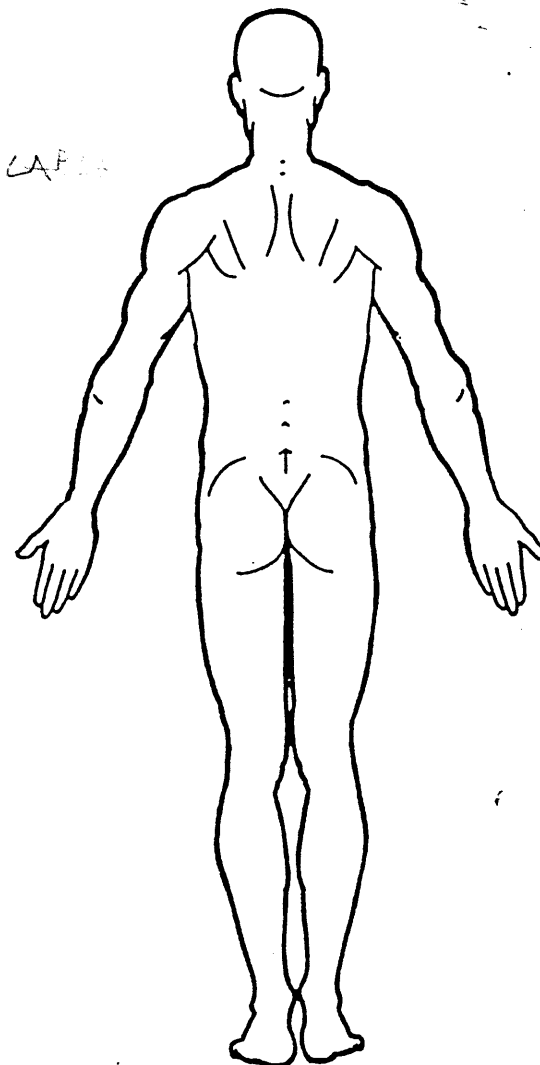
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- (2) Moderate injury
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OFFICIAL INJURY DATA—SOFT TISSUE INJURIES

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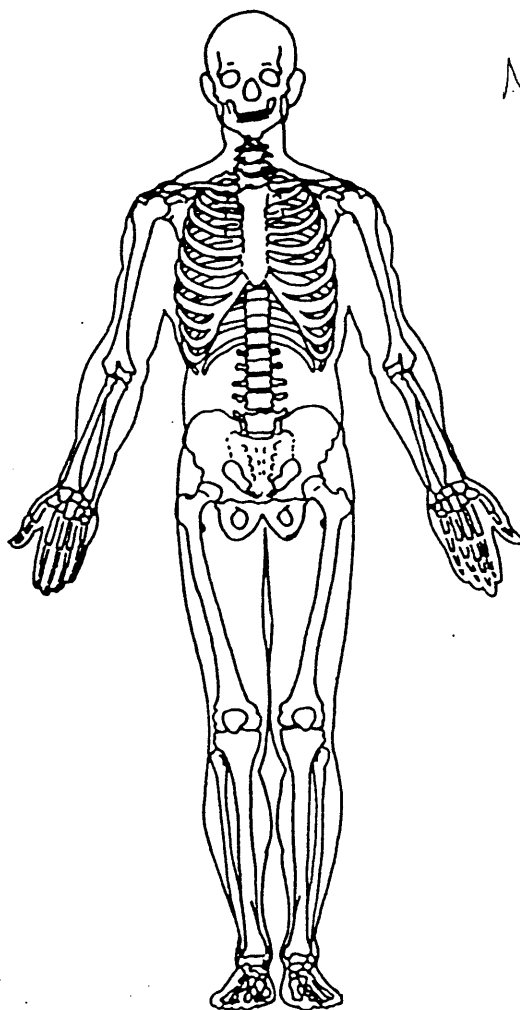


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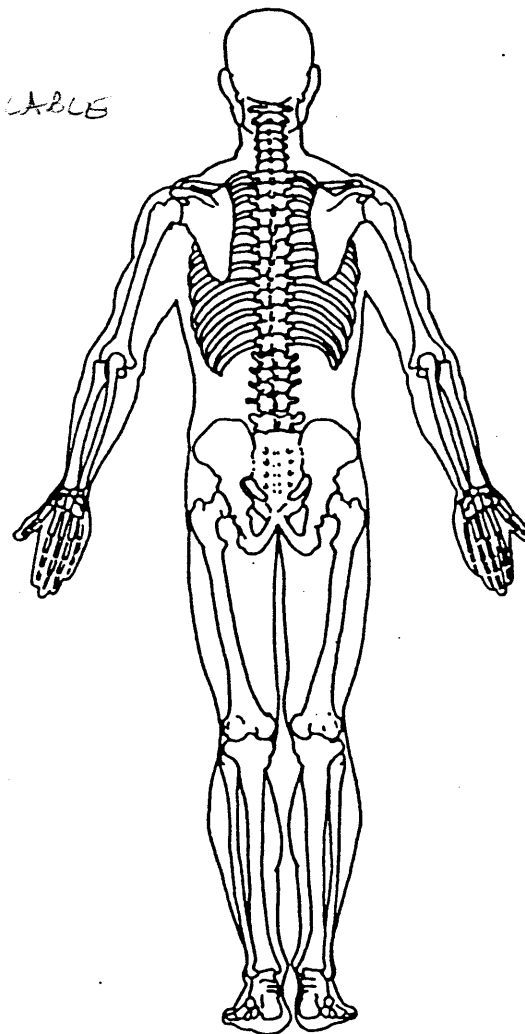


OFFICIAL INJURY DATA — SKELETAL INJURIES

Indicate the *Location, Lesion, Detail* (size, depth, fracture type, head injury clinical signs and neurological deficits), and *Source* of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



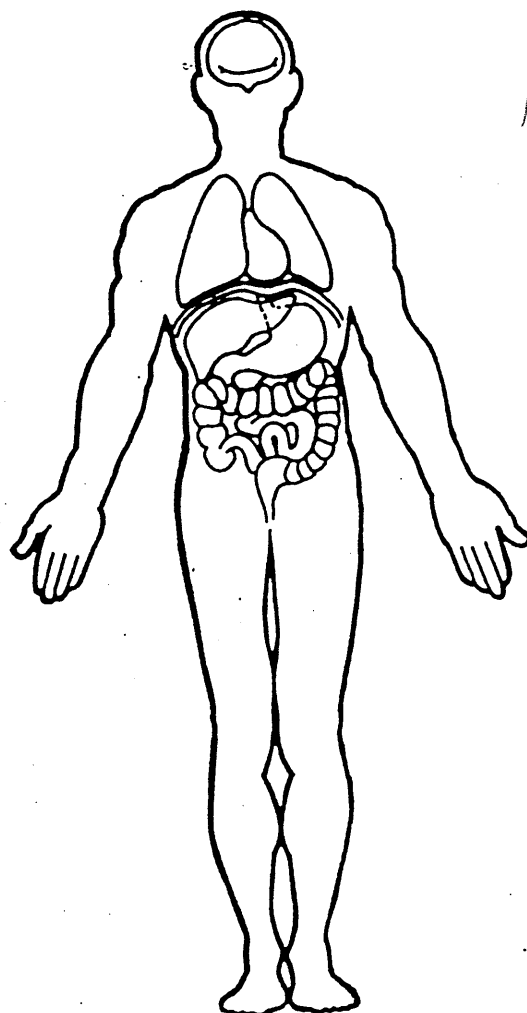
NOT AVAILABLE



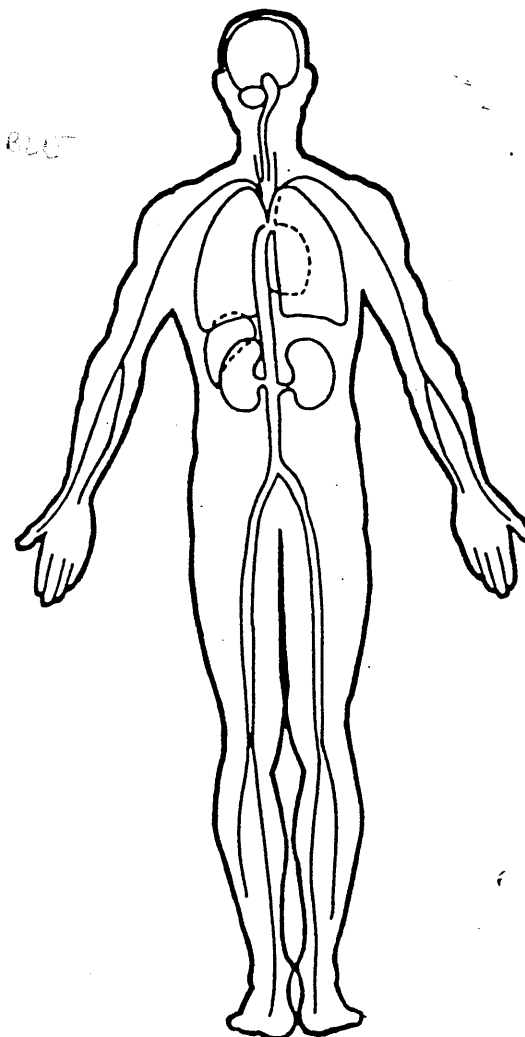
OFFICIAL INJURY DATA—INTERNAL INJURIES

BEST AVAILABLE COPY

Indicate the *Location, Lesion, Detail* (size, depth, fracture type, head injury clinical signs and neurological deficits), and *Source* of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



NOT AVAILABLE





U.S. Department of Transportation
National Highway Traffic Safety
Administration

INTERVIEW FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Primary Sampling Unit Number NCSE Interviewee(s) Role(s) or Name(s) WIFE

Case Number—Stratum 90-13

Vehicle Number 01

Review the Interview Cue Sheet prior to conducting interview(s) to ensure the acquisition of all pertinent data.

GENERAL DESCRIPTION OF ACCIDENT SEQUENCE

INTERVIEWEE DID NOT WANT TO
ANSWER THIS QUESTION—SAID
IT WAS ON THE POLICE REPORT

SPECIFIC QUESTIONS

Key to Researcher: Have you obtained the following through the interviewee(s) description and specific questions?

- | | | |
|--|---|--|
| <input type="checkbox"/> PRE-CRASH, AT IMPACT | <input type="checkbox"/> Speed estimates (precrash/at impact) | <input type="checkbox"/> Previous vehicle damage |
| <input type="checkbox"/> vehicle travel/driver intention | <input type="checkbox"/> Post-impact trajectory | <input type="checkbox"/> Glazing type |
| <input type="checkbox"/> Direction of travel | <input type="checkbox"/> Door status (precrash/postcrash) | <input type="checkbox"/> Vehicle glazing status |
| <input type="checkbox"/> Avoidance maneuvers | <input type="checkbox"/> Final rest position | <input type="checkbox"/> PAR clarifications |
| <input type="checkbox"/> Impact description/orientation | | <input type="checkbox"/> Glove box status |

Cargo? No ☐ Yes ☐ Interviewee's Estimated Cargo Weight _____

Description of Cargo _____

Present Location of Vehicle (if not yet inspected)? _____

National Accident Sampling System—Crashworthiness Data System: Interview Form

Page 2

OCCUPANT DATA				
Enter the occupant's seat position in the first row and complete the column below it using the information from the interviewee(s).				
SEAT POSITION	LF	RF		
AGE/SEX	39	36		
HEIGHT (IN.)	6 ²	6 ²		
WEIGHT (LBS.)	190	175		
POSTURE	NORMAL	NORMAL		
EJECTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes				
DESCRIBE THE EJECTION				
ENTRAPPED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes				
DESCRIBE ENTRAPMENT				
TYPE OF RESTRAINT AVAILABLE?	L4S AIR BAG	L4S		
HOW WERE THE BELTS WORN?	NORMAL	NORMAL		
DESCRIBE ANY RESTRAINT FAILURE MODE	NONE	NONE		
TYPE OF TREATMENT	E.R.	E.R.		
DAYS IN HOSPITAL?	NONE	NONE		
NO. OF LOST WORK DAYS?	NOT SURE	NOT SURE		

National Accident Sampling System—Crashworthiness Data System: Interview Form

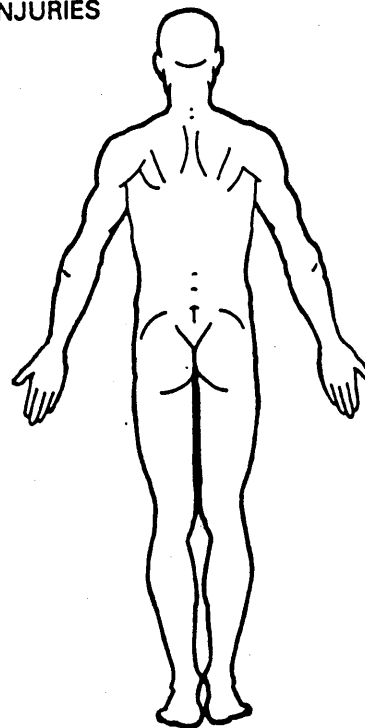
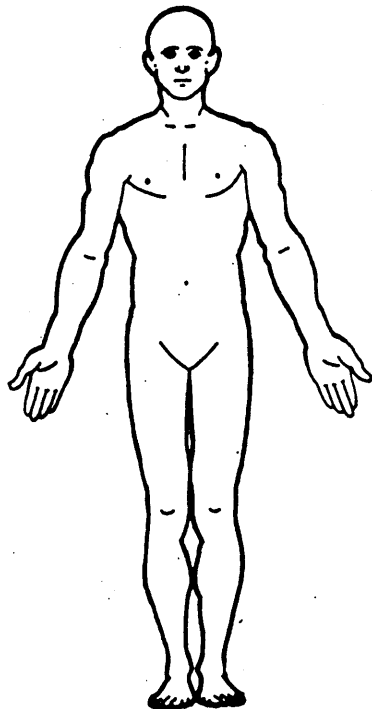
Page 3

PSU Number NCSI Case Number—Stratum 90-13 Vehicle Number 01 Occupant Number 01

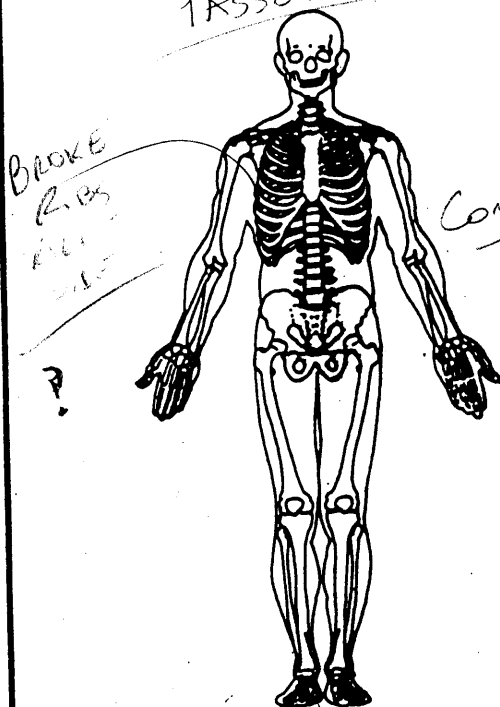
INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): WIFE

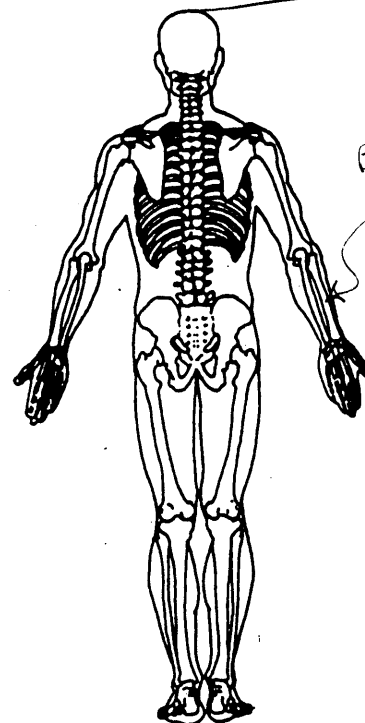
SOFT TISSUE/INTERNAL INJURIES



SKELETAL INJURIES

PASSENGERDRIVERBROKE
R. BR
F.L.
W.L.CONTUSIONS
?

?

BROKE
RIGHT
ARM
BRACINGCONTUSIONS
&
ABRASIONS
?

The space provided on the back of this page may be used to document injuries noted by the interviewee(s).



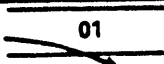
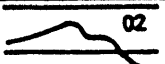
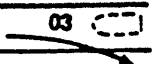
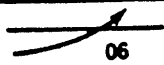
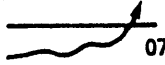

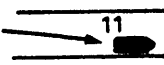

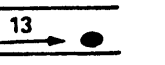
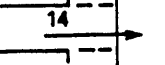
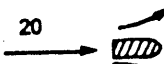
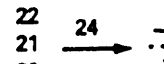
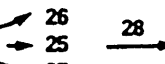
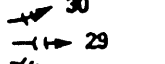
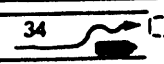


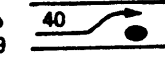
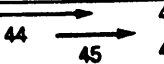
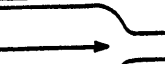
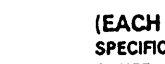


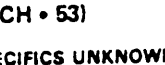

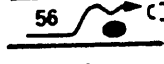

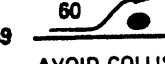


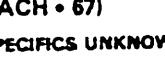
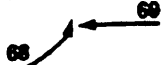
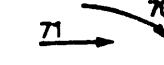
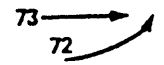
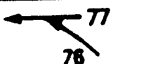
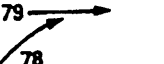
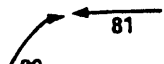

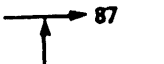

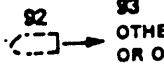

US Department of Transportation
National Highway Traffic Safety
Administration

GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

<p>1. Primary Sampling Unit Number <u>NCSI</u></p> <p>2. Case Number—Stratum <u>90-13</u></p> <p>3. Vehicle Number <u>02</u></p> <p style="text-align: center;">VEHICLE IDENTIFICATION</p> <p>4. Vehicle Model Year <u>91</u> Code the last two digits of the model year (99) Unknown</p> <p>5. Vehicle Make (specify): <u>20</u> <u>CHEVROLET</u> Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual. (99) Unknown</p> <p>6. Vehicle Model (specify): <u>470</u> <u>BLAZER</u> Applicable codes are found in your NASS CDS Data Collection, Coding, and Editing Manual. (99) Unknown</p> <p>7. Body Type <u>4-Door</u> <u>04</u> Note: Applicable codes are found on the back of this page.</p> <p>8. Vehicle Identification Number <u>1GNC513Z8M</u> Left justify; Slash zeros and letter Z (0 and Z) No VIN—Code all zeros Unknown—Code all nine's</p> <p style="text-align: center;">OFFICIAL RECORDS</p> <p>9. Police Reported Vehicle Disposition <u>1</u> (0) Not towed due to vehicle damage (1) Towed due to vehicle damage (9) Unknown</p> <p>10. Police Reported Travel Speed <u>99</u> Code to the nearest mph (NOTE: 00 means less than 0.5 mph) (97) 96.5 mph and above (99) Unknown</p>	<p>11. Police Reported Alcohol or Drug Presence <u>0</u> (0) Neither alcohol nor drugs present (1) Yes (alcohol present) (2) Yes (drugs present) (3) Yes (alcohol and drugs present) (4) Yes (alcohol or drugs present—specifics unknown) (7) Not reported (8) No driver present (9) Unknown</p> <p>12. Alcohol Test Result for Driver <u>96</u> Code actual value (decimal implied before first digit—0.xx) (95) Test refused (96) None given (97) AC test performed, results unknown (98) No driver present (99) Unknown Source _____</p> <p style="text-align: center;">ACCIDENT RELATED</p> <p>13. Speed Limit <u>35</u> (00) No statutory limit Code posted or statutory speed limit (99) Unknown</p> <p>14. Attempted Avoidance Maneuver <u>01</u> (00) No impact (01) No avoidance actions (02) Braking (no lockup) (03) Braking (lockup) (04) Braking (lockup unknown) (05) Releasing brakes (06) Steering left (07) Steering right (08) Braking and steering left (09) Braking and steering right (10) Accelerating (11) Accelerating and steering left (12) Accelerating and steering right (97) No driver present (98) Other action (specify): _____ (99) Unknown</p> <p>15. Accident Type <u>68</u> Applicable codes may be found on the back of page two of this field form (00) No impact Code the number of the diagram that best describes the accident circumstance (98) Other accident type (specify): _____ (99) Unknown</p>
---	--

**** STOP HERE IF GV07 DOES NOT EQUAL 01-49 ****

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I. Single Driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B. Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C. Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER 16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D. Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 25, 26, 27	 24 DECEL. 28, 30, 31	 26 AVOID COLLISION WITH VEH.	(EACH • 32) SPECIFICS OTHER (EACH • 33) SPECIFICS UNKNOWN
	E. Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER (EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe Angle	 44 45 46 47	 46 45 47	 48 45 47	(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN
III Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	 51 (EACH • 52) SPECIFICS OTHER	 53 (EACH • 53) SPECIFICS UNKNOWN		
	H. Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER (EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe Angle	 64 LATERAL MOVE	 66 (EACH • 66) SPECIFICS OTHER	 67 (EACH • 67) SPECIFICS UNKNOWN		
IV. Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTIONS	 73 72	(EACH • 74) SPECIFICS OTHER (EACH • 75) SPECIFICS UNKNOWN	
	K. Turn Into Path	 77 76 TURN INTO SAME DIRECTION	 79 78	 81 80 TURN INTO OPPOSITE DIRECTIONS	 83 82	(EACH • 84) SPECIFICS OTHER (EACH • 85) SPECIFICS UNKNOWN
V. Intersecting Paths (Vehicle Damage)	L. Straight Paths	 87 86	 89 88	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN	
VI. Miscellaneous	M. Backing Etc.	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	96 Other Accident Type 99 Unknown Accident Type 00 No Impact		

National Accident Sampling System – Crashworthiness Data System: General Vehicle Form

Page 2

OCCUPANT RELATED16. Driver Presence in Vehicle 1

- (0) Driver not present
(1) Driver present
(9) Unknown

17. Number of Occupants This Vehicle 01
(00-96) Code actual number of occupants for this vehicle

- (97) 97 or more
(99) Unknown

18. Number of Occupant Forms Submitted 01**VEHICLE WEIGHT ITEMS**19. Vehicle Curb Weight 03,300
Code weight to nearest 100 pounds.

- (010) Less than 1050 pounds
(135) 13,500 lbs or more
(999) Unknown

Source: _____

20. Vehicle Cargo Weight 0,000
Code weight to nearest 100 pounds.

- (00) Less than 50 pounds
(97) 9,650 lbs or more
(99) Unknown

RECONSTRUCTION DATA21. Towed Trailing Unit 0

- (0) No towed unit
(1) Yes—towed trailing unit
(9) Unknown

22. Documentation of Trajectory Data for This Vehicle 0

- (0) No
(1) Yes

23. Post Collision Condition of Tree or Pole (for Highest Delta V) 0

- (0) Not collision (for highest delta V) with tree or pole
(1) Not damaged
(2) Cracked/sheared
(3) Tilted <45 degrees
(4) Tilted ≥45 degrees
(5) Uprooted tree
(6) Separated pole from base
(7) Pole replaced
(8) Other (specify): _____

(9) Unknown

24. Rollover 0

- (0) No rollover (no overturning)

Rollover (primarily about the longitudinal axis)

- (1) Rollover, 1 quarter turn only
(2) Rollover, 2 quarter turns
(3) Rollover, 3 quarter turns
(4) Rollover, 4 or more quarter turns (specify): _____

- (5) Rollover—end-over-end (i.e., primarily about the lateral axis)

- (9) Rollover (overturn), details unknown

OVERRIDE/UNDERRIDE (THIS VEHICLE)25. Front Override/Underride (this vehicle) 026. Rear Override/Underride (this vehicle) 0

- (0) No override/underride, or not an end-to-end impact

Override (see specific CDC)

- (1) 1st CDC
(2) 2nd CDC
(3) Other not automated CDC (specify): _____

Underride (see specific CDC)

- (4) 1st CDC
(5) 2nd CDC
(6) Other not automated CDC (specify): _____

- (7) Medium/heavy truck override
(9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value
(997) Noncollision
(998) Impact with object
(999) Unknown

27. Heading Angle for This Vehicle 6028. Heading Angle for Other Vehicle 270

National Accident Sampling System—Crashworthiness Data System: General Vehicle Form

Page 3

29. Basis for Total Delta V (Highest) 1

Delta V Calculated

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

Delta V Not Calculated

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction techniques, regardless of adequacy of damage data.
- (6) All vehicles and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

30. Total Delta V Secondary Highest
18.5 Nearest mph 19

(NOTE: 00 means less than 0.5 mph)
 (97) 96.5 mph and above
 (99) Unknown

31. Longitudinal Component of Delta V + 16

-16.0 Nearest mph

(NOTE: —00 means greater than —0.5 and less than +0.5 mph)
 (±97) ±96.5 mph and above
 (—99) Unknown

32. Lateral Component of Delta V Secondary Highest
-9.3 Nearest mph + 209

(NOTE: —00 means greater than —0.5 and less than +0.5 mph)
 (±97) ±96.5 mph and above
 (—99) Unknown

33. Energy Absorption 47,800

46771.7 Nearest 100 foot-lbs

(NOTE: 0000 means less than 50 Foot-Lbs)
 (9997) 999,650 foot-lbs or more
 (9999) Unknown

34. Confidence in Reconstruction Program Results (for Highest Delta V) 1

- (0) No reconstruction
- (1) Collision fits model—results appear reasonable
- (2) Collision fits model—results appear high
- (3) Collision fits model—results appear low
- (4) Borderline reconstruction—results appear reasonable

35. Type of Vehicle Inspection 2

- (0) No Inspection
- (1) Complete inspection
- (2) Partial inspection (specify):

UNDER REPAIR

36. Is this an AOPS Vehicle?

- (0) No
- (1) Yes

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), ***
 DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

VEHICLE IDENTIFICATION

LOCATOR

Specific Impact No.	Location of Direct Damage	Location of Field L	Location of Maximum Crush
1	FRONT BUMPER		

Use as many lines/columns as necessary to describe each damage profile.

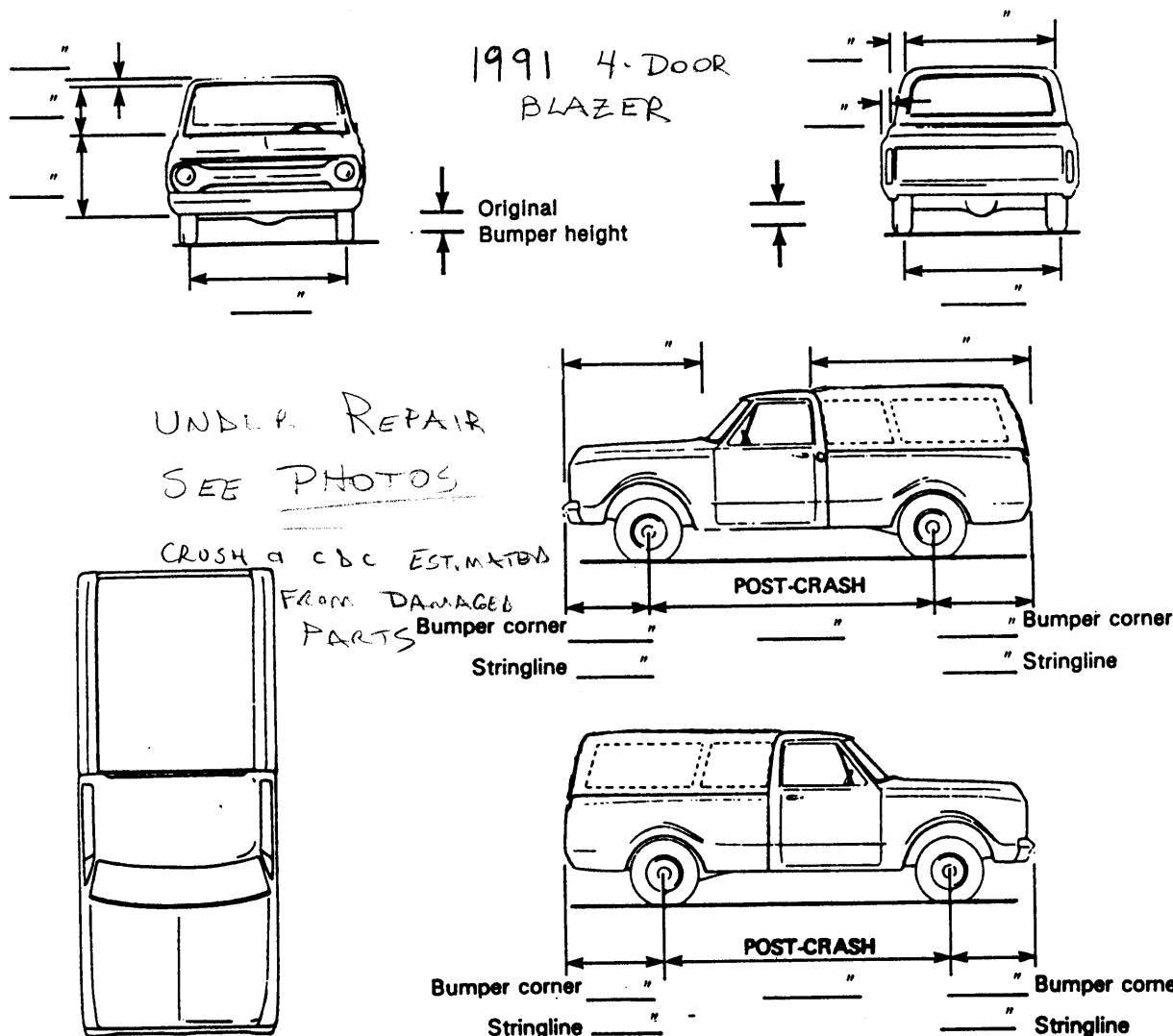
[illegible]

National Accident Sampling System—Crashworthiness Data System: Exterior Vehicle Form

2e

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted RF _____ LF _____ RR _____ LR _____ b. Tire deflated RF _____ LF _____ RR _____ LR _____ (1) Yes (2) No (8) NA (9) Unk.		ORIGINAL SPECIFICATIONS Wheelbase _____ 107. Overall Length _____ 176.8 Maximum Width _____ 65.4 Curb Weight _____ 3300 Average Track _____ Front Overhang _____ Rear Overhang _____ Engine Size: cyl./ displ. _____ Undeformed End Width _____		WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF \pm _____° LF \pm _____° RR \pm _____° LR \pm _____° Within ± 5 degrees
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic		DRIVE WHEELS <input type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD		
		Approximate Cargo Weight _____		



CDC WORKSHEET

CODES FOR OBJECT CONTACTED

01-30 – Vehicle Number

Noncollision

- (31) Overturn – rollover
 (32) Fire or explosion
 (33) Jackknife
 (34) Other intraunit damage (specify):

- (35) Noncollision injury
 (38) Other noncollision (specify):

(39) Noncollision – details unknown

Collision with Fixed Object

- (41) Tree (≤ 4 inches in diameter)
 (42) Tree (> 4 inches in diameter)
 (43) Shrubbery or bush
 (44) Embankment

(45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (≤ 4 inches in diameter)
 (51) Pole or post (> 4 but ≤ 12 inches in diameter)
 (52) Pole or post (> 12 inches in diameter)
 (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
 (55) Impact attenuator
 (56) Other traffic barrier (specify):

- (57) Fence
 (58) Wall
 (59) Building
 (60) Ditch or Culvert
 (61) Ground
 (62) Fire hydrant
 (63) Curb
 (64) Bridge
 (68) Other fixed object (specify):

(69) Unknown fixed object

Collision With Nonfixed Object

- (71) Motor vehicle not in transport
 (72) Pedestrian
 (73) Cyclist or cycle
 (74) Other nonmotorist or conveyance (specify):

- (75) Vehicle occupant
 (76) Animal
 (77) Train
 (78) Trailer, disconnected in transport
 (88) Other nonfixed object (specify):

(89) Unknown nonfixed object

(98) Other event (specify):

(99) Unknown event or object

DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	01	40	00	E	D	E	W	02
---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---
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National Accident Sampling System – Crashworthiness Data System: Exterior Vehicle Form

Page 4

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>01</u>	7. <u>E</u>	8. <u>D</u>	9. <u>E</u>	10. <u>W</u>	11. <u>02</u>

Second Highest Delta "V"

12. ____	13. ____	14. ____	15. ____	16. ____	17. ____	18. ____	19. ____
----------	----------	----------	----------	----------	----------	----------	----------

CRUSH PROFILE

(The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. ALL MEASUREMENTS ARE IN INCHES.)

HIGHEST DELTA "V"

20. L	21. C1	C2	C3	C4	C5	C6	22. - - D
<u>064</u>	<u>02</u>	<u>04</u>	<u>06</u>	<u>12</u>	<u>08</u>	<u>06</u>	<u>1000</u>

Second Highest Delta "V"

23. L	24. C1	C2	C3	C4	C5	C6	25. + - D
____	____	____	____	____	____	____	____

26. Are CDCs Documented
but Not Coded on The
Automated File
(0) No
(1) Yes

0

27. Researcher's Assessment
of Vehicle Disposition
(0) Not towed due to
vehicle damage
(1) Towed due to
vehicle damage
(9) Unknown

1

28. Original Wheelbase
____ Code to the
nearest
tenth of an inch
(9999) Unknown

107.0

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED ***
(I.E., GV09 = 0 OR 9), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.

Appendix C:
AIRBAG SUPPLEMENT FORMS

BEST AVAILABLE COPY

SYSTEM READINESS LAMP
(In Instrument Cluster)

PRE-IMPACT LAMP CONDITION

- (1) Functioning/ProvedOut
- (2) Inoperative
- (9) Unknown

DRIVER'S REPORT OF
PRE-IMPACT FLASHING

- (00) No Flashing Reported
- (01) Continuous Flashing
- (02) --- >Number of Flashes
- (11)
- (12) Constant Light
- (19) Flashing, Unkn Number
- (88) Not App (system removed)
- (99) Unknown

PERIOD OF PRE-IMPACT FLASHING

- (0) No Flashing
- (1) Same Day as Impact
- (2) Prior Day
- (3) Prior Two Days
- (4) Prior Week
- (5) Prior Month
- (6) Over One Month
- (9) Unknown

POST-IMPACT LAMP CONDITION

- (1) Functioning/ProvedOut
- (2) Inoperative
- (9) Unknown

POST-IMPACT FLASHING

- (00) No Flashing
- (01) Continuous Flashing
- (02) -- >Number of Flashes
- (11)
- (12) Constant Light
- (19) Flashing, Unkn Number
- (88) Not Appl (removed)
- (99) Unknown

AIRBAG VEHICLE
FIRST HARMFUL EVENT

13

- (01) Fire or explosion
- (02) Immersion
- (03) Gas Inhalation
- (04) Fell from vehicle
- (05) Injured in vehicle
- (06) Other noncollision (specify):
- (07) Overturn
- (08) Jackknife with intraunit damage
Collision With:
- (09) Pedestrian
- (10) Pedalcyclist
- (11) Railway train
- (12) Animal
- (13) Motor vehicle in transport (same roadway)
- (14) Motor vehicle in transport (other roadway)
- (15) Parked motor vehicle
- (16) Other type nonmotorist (specify):
- (17) Thrown or falling object
- (18) Boulder
- Collision with Fixed Object:
- (20) Building
- (21) Impact attenuator/Crash Cushion
- (22) Bridge pier or abutment
- (23) Bridge parapet end
- (24) Bridge rail
- (25) Guardrail
- (26) Concrete traffic barrier
- (27) Median barrier
- (28) Other longitudinal barrier (specify):
- (29) Highway/Traffic sign post
- (30) Overhead sign support
- (31) Luminaire/Light support
- (32) Utility pole
- (33) Other post. pole, or support (specify):
- (34) Culvert
- (35) Curb
- (36) Ditch
- (37) Embankment-earth
- (38) Embankment-rock, stone or concrete
- (39) Fence (wooden, wire, chain link, etc.)
- (40) Wall (stone, rock, metal, etc.)
- (41) Fire hydrant
- (42) Shrubbery
- (43) Tree
- (44) Other fixed object (specify):
- (45) Pavement surface irregularity (pothole, grooved, grates)
- (99) Unknown

AIRBAG VEHICLE IMPACT SUMMARY

VEHICLE ROLE

- (0) Non-collision
 (1) Striking Unit
 (2) Struck Unit
 (3) Both Striking and Struck
 (9) Unknown

MANNER OF LEAVING SCENE

- (1) Driven
 (2) Towed-due to damage
 (3) Towed - not for damage
 (4) Towed - details unknown
 (5) Abandoned
 (9) Unknown

NUMBER OF IMPACT EVENTS

- (8) 8 or more, (9) Unknown

ROLLOVER (0) No Rollover

- (1) First Event
 (2) Subsequent Event
 (3) Yes, Unknown Event
 (9) Unknown

OVERRIDE/UNDERRIDE

- (1) No over/underride
 (1) Override - 1st CDC
 (3) - Other CDC
 (4) Underride - 1st CDC
 (6) - Other CDC
 (9) Unknown

AIRBAG VEHICLE DAMAGE

- CODES: (1) Yes, DAMAGED
 (2) No Damage
 (9) Unknown

LEFT FRONT FENDER DAMAGE

RIGHT FRONT FENDER DAMAGE

CENTER TOP OF GRILLE DAMAGE

FRONT BUMPER E.A. STATUS: Left

- (1) Normal Right
 (2) Extended
 (3) Partial Compression
 (4) Complete Compression
 (5) Not Applicable
 (9) Unknown

FIRST AIRBAG VEHICLE IMPACT:

CONFIGURATION

- (0) Struck Object or Pedestrian
 (1) Rear-End
 (2) Head-On
 (3) Rear-to-Rear
 (4) Angle
 (5) Sideswipe - Same Direction
 (6) Sideswipe-Opposite Direct.
 (7) NonCollision Fell from Veh
 (8) Nonimpact Deployment
 (9) Unknown

CDC

11 - F Y E W - 2OBJECT CONTACTED: V2

PRIMARY/DEPLOYMENT IMPACT:

EVENT NUMBER

TOTAL DELTA-V

LONGITUDINAL DELTA-V

CONFIGURATION

- (0) Struck Object or Pedestrian
 (1) Rear-End
 (2) Head-On
 (3) Rear-to-Rear
 (4) Angle
 (5) Sideswipe - Same Direction
 (6) Sideswipe-Opposite Direct.
 (7) NonCollision Fell from Veh
 (8) Nonimpact Deployment
 (9) Unknown

CDC

11 - F Y E W - 2OBJECT CONTACTED: V2

NOTES:

AIRBAG SYSTEM DAMAGE

CODES: (1) Yes, Damaged*
 (2) No, Intact
 (8) Not App. (Removed)
 (9) Unknown

AIRBAG MODULE

SENSORS: Left Front

Center Front

Right Front

Rear, Cowl

DIAGNOSTIC MODULE

WIRING

KNEE DIVERTER

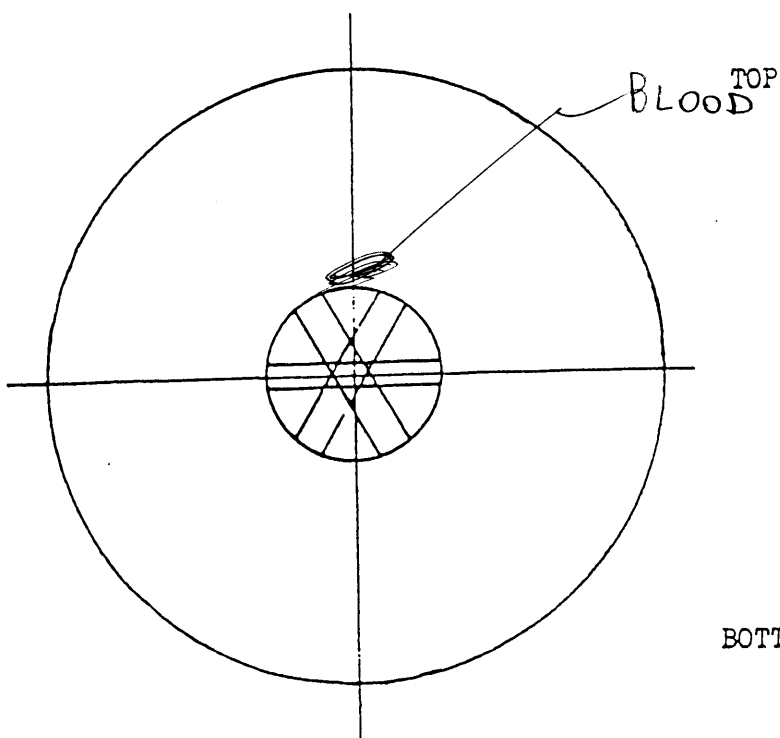
INDICATION OF DISCONNECTED
 OR LOOSE ELECTRICAL
 CONNECTORS

CONDITION OF DEPLOYED BAG

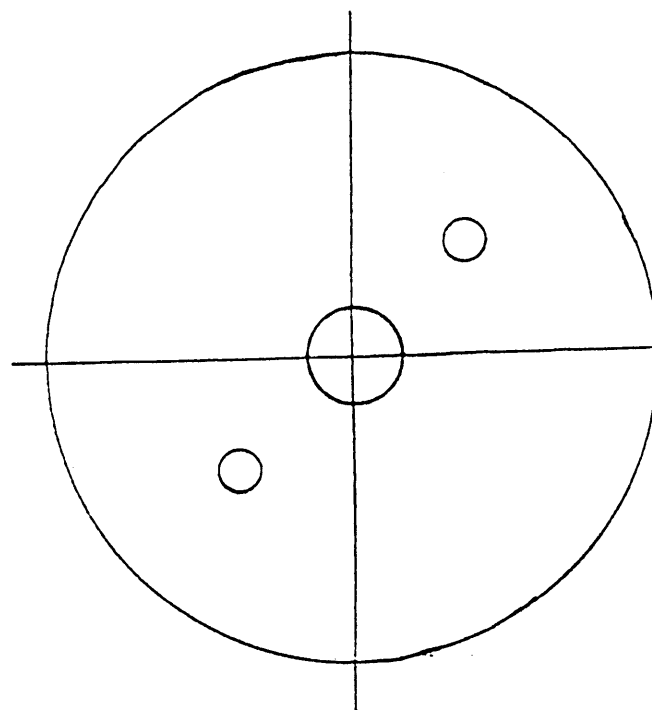
- (1) Bag Intact
 (2) Split or Torn*
 (3) Cut by Object in Impact*
 (4) Cut after Accident*
 (5) Other (e.g., burned)*
 (8) N/A (not deployed)
 (9) Unknown

*DESCRIBE System and Bag Damage:

NOTE DAMAGE AND CONTACT MARKS ON AIRBAG DIAGRAMS BELOW:



FRONT



BOTTOM

BACK

OCCUPANTS of AIRBAG CAR		NOTES:
NUMBER OF OCCUPANTS IN VEHICLE (8) 8 or more	<u>2</u>	
NUMBER OF INJURED PERSONS	<u>2</u>	
MAXIMUM AIS IN AIRBAG VEHICLE (0) No Injury (1-6) AIS Severity (7) Injured, Unknown Severity (9) Unknown	<u>2</u>	
DRIVER AGE <u>39</u> SEX <u>M</u>		
NUMBER OF DRIVER INJURIES	<u>3</u>	
SOURCE OF BEST INJURY DATA	<u>7</u>	
(0) Not Injured		
(1) Autopsy w/wo med. records		
(2) Hospital Medical Records		
(3) Emergency Room only		
(4) Private physician, Clinic		
(5) Lay Coroner Report		
(6) EMS Personnel		
(7) Interviewee		
(8) Police		
(9) Unknown		

MAXIMUM AIS BY BODY REGION		
REGION	MAX AIS	CONTACT
Head/Neck/Face	---	---
Chest	---	---
Abdomen	---	---
Leg/Hips	---	---
Other (Arms)	<u>2</u>	<u>04</u>
DRIVER MAXIMUM	<u>2</u>	<u>04</u>

EJECTION: Extent <u>NONE</u>		
Portal _____		

DRIVER BELT USAGE: (1) Used (2) Not Used (9) Unknown 1

Evidence: _____

DRIVER POSTURE:

Any Comments Recorded (1) Yes, (2) No 1

Describe driver's posture and position on seat including specific comments on head, torso, buttocks, legs and feet. Also note hand and arm position. Did driver brace before crash? Describe:

NORMAL SEATING POSITION. BRACED BEFORE IMPACT.

DRIVER FOREIGN OBJECTS: Comments Recorded (1) Yes, (2) No 2

Was driver wearing contact lenses or eyeglasses? Or holding any foreign object at the time of the impact (packages on lap, pipe, food, bottle, cigarette, etc.)? Did any lenses, objects, or jewelry play any role?

NONE

DRIVER COMMENTS:

Comments Recorded (1) Yes, (2) No 1

Was the driver aware that the vehicle was equipped with a supplemental restraint system? Did driver offer any comments on smoke, noise, etc.? Did the driver comment on the airbag as a restraint system? Describe:

YES AWARE OF AIRBAG AND THOUGHT THE
AIRBAG WAS VERY EFFECTIVE IN REDUCING
THE DRIVERS INJURIES

PASSENGER-AIRBAG CONTACT

(1) Yes, (2) No, (9) Unknown 2

Describe: _____

Appendix D:
EDCRASH RESULTS



U.S. Department of Transportation
National Highway Traffic Safety
Administration

BEST AVAILABLE COPY

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

CRASHPC PROGRAM SUMMARY

Identifying Title NCSI	90-13 Case No. - Stratum	01 Accident Event Sequence No.	90 Date (mm dd yy)
CRASHPC Vehicle Identification			
Vehicle 1	1991 Year	CHEV Make	CADILLAC Model
Vehicle 2	1991 Year	CHEV Make	BLAZER Model
			1 NASS Veh. No.

GENERAL INFORMATION

VEHICLE 1				VEHICLE 2			
Size	4			Size	3		
Weight	3898	365	0	Weight	3300	125	3425
	Curb	Occupant(s)	Cargo		Curb	Occupant(s)	Cargo
CDC	11FEW2			CDC	01FEW2		
PDOF	---			PDOF	---		
Stiffness	9			Stiffness	7		

SCENE INFORMATION

Rest and Impact Positions		<input checked="" type="checkbox"/> No, Go To Damage Information	<input type="checkbox"/> Yes
VEHICLE 1		VEHICLE 2	
Rest Position		Rest Position	
X	_____	X	_____
Y	_____	Y	_____
PSI	_____	PSI	_____
Impact Position		Impact Position	
X	_____	X	_____
Y	_____	Y	_____
PSI	_____	PSI	_____
Slip Angle	_____	Slip Angle	_____

VEHICLE MOTION

Sustained Contact		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
VEHICLE 1		VEHICLE 2	
Skidding	<input type="checkbox"/> No <input type="checkbox"/> Yes	Skidding	<input type="checkbox"/> No <input type="checkbox"/> Yes
Skidding Stop Before Rest	<input type="checkbox"/> No <input type="checkbox"/> Yes	Skidding Stop Before Rest	<input type="checkbox"/> No <input type="checkbox"/> Yes
End-of-Skidding Position		End-of-Skidding Position	
X	_____	X	_____
Y	_____	Y	_____
PSI	_____	PSI	_____
Curved Path	<input type="checkbox"/> No <input type="checkbox"/> Yes	Curved Path	<input type="checkbox"/> No <input type="checkbox"/> Yes
Point on Path		Point on Path	
X	_____	X	_____
Y	_____	Y	_____
Rotation Direction	<input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW	Rotation Direction	<input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW
Rotation > 360°	<input type="checkbox"/> No <input type="checkbox"/> Yes	Rotation > 360°	<input type="checkbox"/> No <input type="checkbox"/> Yes

National Accident Sampling System—Crashworthiness Data System: CrashPC Program Summary

FRICTION INFORMATION

Coefficient of Friction . _____

Rolling Resistance Option _____

Vehicle 1 Rolling Resistance

LF _____ RF _____

LR _____ RR _____

Vehicle 2 Rolling Resistance

LF _____ RF _____

LR _____ RR _____

TRAJECTORY INFORMATIONTrajectory Data ☒ No ☐ Yes**If No, Go To Damage Information**

Vehicle 1 Steer Angles

LF _____ RF _____

LR _____ RR _____

Vehicle 2 Steer Angles

LF _____ RF _____

LR _____ RR _____

Terrain Boundary ☐ No ☐ Yes

First Point

X _____ Y _____

Second Point

X _____ Y _____

Secondary Friction Coefficient . _____

DAMAGE INFORMATION

VEHICLE 1

Damage Length _____ 66.0 _____

Crush Depths

C1 17.5 _____C2 15.0 _____C3 9.25 _____C4 9.0 _____C5 3.0 _____C6 1.0 _____Damage Offset ± _____ 0.0 _____

VEHICLE 2

Damage Length _____ 64.0 _____

Crush Depths

C1 2.0 _____C2 4.0 _____C3 6.0 _____C4 12.0 _____C5 8.0 _____C6 6.0 _____Damage Offset ± _____ 0.0 _____**IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.**

Model Year: _____

Make: _____

Model: _____

VIN: _____

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate vehicle damage sketch and dimensions to the Form.

SUMMARY OF EDCRASH RESULTS

ENGINEERING DYNAMICS CORPORATION

Date: 1991 Time 11:51:25

NCSI 90-13

WARNING MESSAGES: NO MESSAGES

VEHICLE # 1

IMPACT SPEED MPH		SPEED CHANGE MPH			BASIS OF RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	
0.0	0.0	0.0	0.0	0.0	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
0.0	0.0	0.0	0.0	0.0	SPINOUT TRAJECTORIES AND DAMAGE
		14.9	-12.9	7.5	DAMAGE DATA ONLY

VEHICLE # 2

IMPACT SPEED MPH		SPEED CHANGE MPH			BASIS OF RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	
0.0	0.0	0.0	0.0	0.0	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
0.0	0.0	0.0	0.0	0.0	SPINOUT TRAJECTORIES AND DAMAGE
		18.5	-16.0	-9.3	DAMAGE DATA ONLY

SUMMARY OF DAMAGE DATA

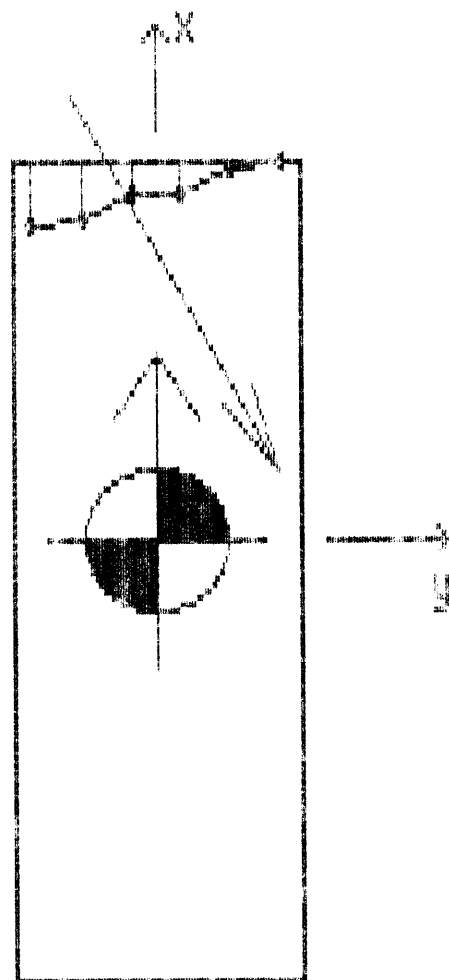
NOTE: '**' indicates default value

	VEHICLE #1	VEHICLE #2
CLASS (SIZE) CATEGORY	4	3
WEIGHT	4263.0 LBS.	3425.0 LBS.
LOC	11FYEW2	01FDEW2
DAMAGE WIDTH	66.0 IN.	64.0 IN.
CRUSH DEPTH 1	17.5 IN.	2.0 IN.
CRUSH DEPTH 2	15.0 IN.	4.0 IN.
CRUSH DEPTH 3	9.3 IN.	6.0 IN.
CRUSH DEPTH 4	9.0 IN.	12.0 IN.
CRUSH DEPTH 5	3.0 IN.	8.0 IN.
CRUSH DEPTH 6	1.0 IN.	6.0 IN.
DAMAGE MIDPOINT OFFSET	0.0 IN.	0.0 IN.
DAMAGE ENERGY	53498.4 FT.-LB.	46771.7 FT.-LB.
MAGNITUDE OF PRINCIPAL FORCE	54637.1 LB.	91617.1 LB.
DIRECTION OF PRINCIPAL FORCE	-30.1 DEG. **	30.0 DEG. **
MOMENT ARM OF PRINCIPAL FORCE	37.5 IN.	-38.6 IN.
DAMAGE CENTROID	-10.4 IN.	5.0 IN.

DIMENSIONAL, INERTIAL AND TIRE/ROAD PROPERTIES

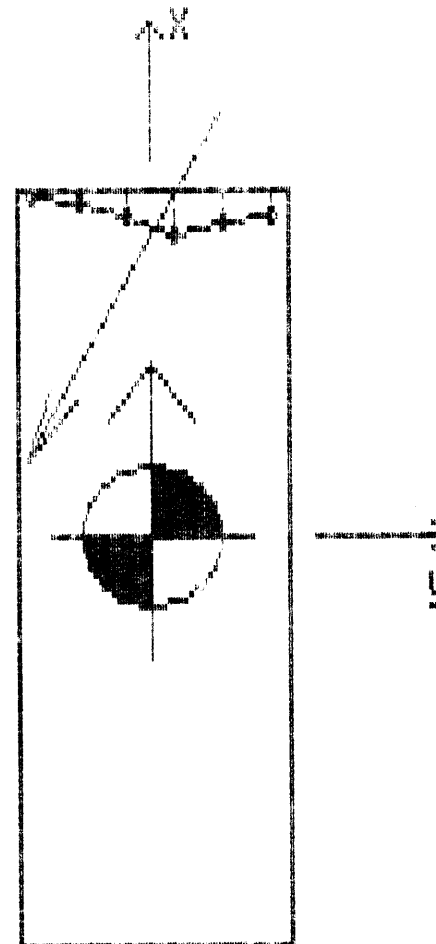
	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	54.7 IN.	51.3 IN.
CG TO REAR AXLE	59.2 IN.	55.5 IN.
TRACK WIDTH	61.8 IN.	58.9 IN.
YAW MOMENT OF INERTIA	41273.0 LB-SEC ² -IN	29463.5 LB-SEC ² -IN
MASS	11.0 LB-SEC ² /IN	8.9 LB-SEC ² /IN
BODY LENGTH FROM CG TO FRONT	98.8 IN.	89.8 IN.
BODY LENGTH FROM CG TO REAR	-114.0 IN.	-106.4 IN.
BODY WIDTH	77.0 IN.	72.6 IN.

Vehicle No.1



CDC/PDOF: 11FYEW2 -30.1 deg
Max. Impact Force: 54637 lb

Vehicle No.2



CDC/PDOF: 01FDEM2 30.0 deg
Max. Impact Force: 91617 lb



EDCRASH Damage Profiles

	Veh #1	Veh #2
Delta-V (mph):		
X	-12.9	-16.0
Y	7.5	-9.3
Tot	14.9	18.5

Crush Data (in):		
W	66.0	64.0
D	0.0	0.0
C1	17.5	2.0
C2	15.0	4.0
C3	9.3	6.0
C4	9.0	12.0
C5	3.0	8.0
C6	1.0	6.0

Appendix E:
REPAIR ESTIMATE

COMBINED VEHICLE INSPECTION/TOTAL LOSS SETTLEMENT REPORT

BEST AVAILABLE COPY

<input type="checkbox"/> INSURED <input checked="" type="checkbox"/> CLAIMANT		OWNER [REDACTED]	CLAIM NUMBER [REDACTED]	
YEAR 1991	MAKE Chevrolet	MODEL Caprice	BODY STYLE 4dr	VIN 1G1BN53E1M1[REDACTED]
CAUSE OF LOSS: <input type="checkbox"/> COLLISION <input type="checkbox"/> THEFT/STRIP <input type="checkbox"/> FIRE <input type="checkbox"/> FLOOD/WATER <input type="checkbox"/> VANDALISM <input type="checkbox"/> OTHER				
PURCHASED FROM: <i>panel \$12900 for car</i>		<input checked="" type="checkbox"/> NEW <input type="checkbox"/> USED	DATE 30 days	LICENSE NO. [REDACTED] MILEAGE 5992

EQUIPMENT & ACCESSORIES POWER <input checked="" type="checkbox"/> Seats <input checked="" type="checkbox"/> Brakes <input checked="" type="checkbox"/> Locks <input checked="" type="checkbox"/> Windows <input checked="" type="checkbox"/> Steering <input type="checkbox"/> Other (remarks)		EXTERIOR <input type="checkbox"/> Vinyl top <input type="checkbox"/> Luggage rack <input type="checkbox"/> Roll bar <input type="checkbox"/> Flared fenders <input type="checkbox"/> Spoiler <input type="checkbox"/> Sun roof <input type="checkbox"/> Oversize mirrors <input type="checkbox"/> Trailer hitch <input type="checkbox"/> Push bumper <input type="checkbox"/> Winch <input type="checkbox"/> Custom paint (remarks) <input type="checkbox"/> Other (remarks)	<input checked="" type="checkbox"/> Cruise control <input checked="" type="checkbox"/> Deluxe trim pkg. <input checked="" type="checkbox"/> Radio (AM/FM comb.) <input checked="" type="checkbox"/> Tape player <i>cassette</i> <input checked="" type="checkbox"/> Tilt steering <input checked="" type="checkbox"/> Other (remarks) <i>Leather seats</i>	ENGINE <input type="checkbox"/> Turbo <input type="checkbox"/> Diesel <input checked="" type="checkbox"/> Fuel inj. <input type="checkbox"/> Other (remarks) <i>8</i> No. Cylinders Displacement	TRANSMISSION <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 4 spd. w/overdrive <input checked="" type="checkbox"/> Automatic	RV/MOTOR HOME/CAMPER/TRAILER <input type="checkbox"/> Auxiliary heater <input type="checkbox"/> Auxiliary A/C <input type="checkbox"/> Awnings <input type="checkbox"/> Built-in cabinets <input type="checkbox"/> Carpeting <input type="checkbox"/> Gas detector <input type="checkbox"/> Overhead Console <input type="checkbox"/> Refrigerator <input type="checkbox"/> Shower/tub <input type="checkbox"/> Stove (oven) <input type="checkbox"/> Swivel seats <input type="checkbox"/> Television <input type="checkbox"/> Tip-out room <input type="checkbox"/> Toilet <input type="checkbox"/> Watercooler <input type="checkbox"/> Water heater <input type="checkbox"/> Other (remarks)	MOTORCYCLE <input type="checkbox"/> Fairing <input type="checkbox"/> Saddlebags <input type="checkbox"/> Trailer <input type="checkbox"/> Sidecar PU TRUCK Cab type Bed type Fuel pkg. GVW Wheelbase
---	--	---	---	---	---	--	--

% OF TIRE WEAR LF 15 RF " LR " RR " Spare ? ☒ W/W ☒ Radial ☒ S/Belted

COMPARABLE VEHICLES		SOURCE & TELEPHONE NO.		QUOTE BY:	DATE	MAKE & MODEL	AVAILABLE	PRICE QUOTE
		YES	NO					
1								
2								
3								

BOOK VALUE: Retail \$ <u>no book price available</u> Book used: <u>Car listed</u> Explain adjustments for mileage, equipment, prior damage, etc. <u>for \$20900. Understand client told</u> <u>ALREADY paid \$12900 + tax & title for car.</u> Explain method used to arrive at base price	ACTIVITY DATES ASSIGNED FIRST CONTACT SETTLED TITLE REC'D TITLE SENT REMITTANCE REC'D CCM PROCESSED	SUBROGATION <input type="checkbox"/> YES <input type="checkbox"/> NO
---	---	--

BASE PRICE \$	TAXES \$	FEES \$	ACV \$
---------------	----------	---------	--------

SALVAGE DISPOSITION LOCATION OF CAR: <u>Gauge - Tusc</u> BUYER'S NAME AND ADDRESS		POOL INV. NO. CONDITION INDICATES SALVAGE WILL BE: <input type="checkbox"/> Rebuilt <input checked="" type="checkbox"/> Sold for parts <input type="checkbox"/> Scrapped
--	--	--

DAMAGE LOCATION DATE SOLD HIGH BID TOWING CHARGES STORAGE CHARGES POOL/MISC. CHARGES OTHER NET SALVAGE RETURN	F S R A DATE SALVAGE BIDS REQUESTED NUMBER OF SALVAGE BIDS REQUESTED DATE HIGHER BIDDER NOTIFIED DISPOSITION OF TITLE DATE REMARKS: [REDACTED]	NUMBER OF SALVAGE BIDS RECEIVED DATE HIGHER BIDDER NOTIFIED DATE CLAIM REPRESENTATIVE SIGNATURE LICENSE NO. (IF APPLICABLE)
---	---	---

↓ TOP LEFT PICTURE ↓



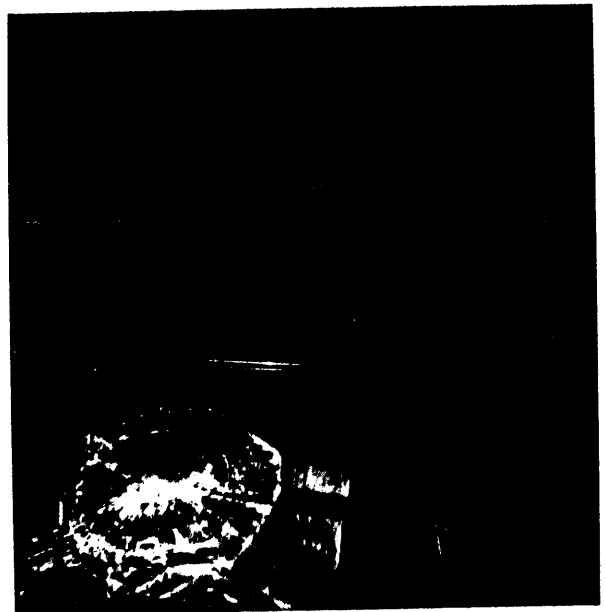
↓ TOP RIGHT PICTURE ↓



↓ BOTTOM LEFT PICTURE ↓



↓ BOTTOM RIGHT PICTURE ↓





POLICY NO. _____

DATE/LOSS _____

INSURED _____

CLAIMANT _____

PICTURE NO. _____

DATE/TIME TAKEN _____

BY _____

WEATHER _____

LOCATION AND VIEW _____

COMMENTS _____

PICTURE NO. _____

DATE/TIME TAKEN _____

BY _____

WEATHER _____

LOCATION & VIEW _____

COMMENTS _____

OUR FILE NO. _____

COMPANY CLAIM NO. _____

